<110>   Searle/Monsanto
         Phippard, Deborah
         Vasanthakamur, Geetha
         Dotson, Stanton
         Ma, Xiao-Jun

<120>   Osteoarthritis tissue-derived nucleic acids, polypeptides,
         vectors, and cells

<130>   SO-3221 PR

<160>   82

<210>   1
<211>   310
<212>   DNA
<213>   Homo sapiens

<400>   1

```
cagaaatact ctttctgcac agaccacact gttttggttc agactcgagg aggaaattcc   60

aatggtgcct tgtgccactt ccccttccta tacaacaacc acaattacac tgattgcact  120

tctgagggca gaagagacaa catgaagtgg tgtgggacca cacagaacta tgatgccgac  180

cagaagtttg ggttctgccc catggctgcc cacgaggaaa tctgcacaac caatgaaggg  240

gtcatgtacc gcattggaga tcagtgggat aagcagcatg acatgggttc acatgatgag  300

gtgcacgttt                                                         310
```

<210>   2
<211>   1986
<212>   DNA
<213>   Homo sapiens

<400>   2

```
cttgggctgt cctttctccc cacgttcacc tgcacttcgt tagagagcag tgttcacatg   60

ccacaccaca agatccccac aatgacataa ctccattcag agactggcgt gactgggctg  120

ggtctcccca ccccccttca gctcttgtat cactcagaat ctggcagcca gttccgtcct  180

gacagagttc acagcatata ttggtggatt cttgtccata gtgcatctgc tttaagaatt  240

aacgaaagca gtgtcaagac agtaaggatt caaaccattt gccaaaaatg agtctaagtg  300

catttactct cttcctggca ttgattggtg gtaccagtgg ccagtactat gattatgatt  360

ttcccctatc aatttatggg caatcatcac caaactgtgc accagaatgt aactgccctg  420

aaagctaccc aagtgccatg tactgtgatg agctgaaatt gaaaagtgta ccaatggtgc  480

ctcctggaat caagtatctt taccttagga ataaccagat tgaccatatt gatgaaaagg  540

cctttgagaa tgtaactgat ctgcagtggc tcattctaga tcacaacctt ctagaaaact  600

ccaagataaa agggagagtt ttctctaaat tgaaacaact gaagaagctg catataaacc  660

acaacaacct gacagagtct gtgggcccac ttcccaaatc tctggaggat ctgcagctta  720

ctcataacaa gatcacaaag ctgggctctt ttgaaggatt ggtaaacctg accttcatcc  780

atctccagca caatcggctg aaagaggatg ctgtttcagc tgcttttaaa ggtcttaaat  840

cactcgaata ccttgacttg agcttcaatc agatagccag actgccttct gggtctccct  900

gtctctcttc taactctcta cttagacaac aataagatca gcaacatccc tgatgagtat  960
```

```
ttcaagcgtt ttaatgcatt gcagtatctg cgtttatctc acaacgaact ggctgatagt 1020

ggaatacctg gaaattcttt caatgtgtca tccctggttg agctggatct gtcctataac 1080

aagcttaaaa acataccaac tgtcaatgaa aaccttgaaa actattacct ggaggtcaat 1140

caacttgaga agtttgacat aaagagcttc tgcaagatcc tggggccatt atcctactcc 1200

aagatcaagc atttgcgttt ggatggcaat cgcatctcag aaaccagtct tccaccggat 1260

atgtatgaat gtctacgtgt tgctaacgaa gtcactctta attaatatct gtatcctgga 1320

acaatatttt atggttatgt ttttctgtgt gtcagttttc atagtatcca tattttatta 1380

ctgtttatta cttccatgaa ttttaaaatc tgagggaaat gttttgtaaa catttatttt 1440

ttttaaagaa aagatgaaag gcaggcctat ttcatcacaa gaacacacac atatacacga 1500

atagacatca aactcaatgc tttatttgta aatttagtgt ttttttattt ctactgtcaa 1560

atgatgtgca aaacctttta ctggttgcat ggaaatcagc caagttttat aatccttaaa 1620

tcttaatgtt cctcaaagct tggattaaat acatatggat gttactctct tgcaccaaat 1680

tatcttgata cattcaaatt tgtctggtta aaaaataggg ggtagatatt gaggccaaga 1740

atattgcaaa atacatgaag cttcatgcac ttaaagaagt atttttagaa taagaatttg 1800

catacttacc tagtgaaact tttctagaat tattttttcac tctaagtcat gtatgtttct 1860

ctttgattat ttgcatgtta tgtttaataa gctactagca aaataaaaca tagcaaatgg 1920

catcactgtg tttgacttct tgtgaaattt ctgtactttg tatataaaat acataaaaca 1980

atagat                                                          1986
```

```
<210>    3
<211>    920
<212>    DNA
<213>    Homo sapiens

<400>    3
```

```
ccgagagtcg tcggggtttc ctgcttcaac agtgcttgga cggaacccgg cgctcgttcc   60

ccacccggc cggccgccca tagccagccc tccgtcacct cttcaccgca ccctcggact  120

gccccaaggc ccccgccgcc gctccagcgc cgcgcagcca ccgccgccgc cgccgcctct  180

ccttagtcgc cgccatgacg accgcgtcca cctcgcaggt gcgccagaac taccaccagg  240

actcagaggc cgccatcaac cgccagatca acctggagct ctacgcctcc tacgtttacc  300

tgtccatgtc ttactacttt gaccgcgatg atgtggcttt gaagaacttt gccaaatact  360

ttcttcacca atctcatgag gagagggaac atgctgagaa actgatgaag ctgcagaacc  420

aacgaggtgg ccgaatcttc cttcaggata tcaagaaacc agactgtgat gactgggaga  480

gcgggctgaa tgcaatggag tgtgcattac atttggaaaa aaatgtgaat cagtcactac  540

tggaactgca caaactggcc actgacaaaa atgacccca tttgtgtgac ttcattgaga  600

cacattacct gaatgagcag gtgaaagcca tcaaagaatt gggtgaccac gtgaccaact  660

tgcgcaagat gggagcgccc gaatctggct ggcggaata tctctttgac aagcacaccc  720

tgggagacag tgataatgaa agctaagcct cgggctaatt tccccatagc cgtggggtga  780

cttccctggt caccaaggca gtgcatgcat gttggggttt cctttacctt ttctataagt  840
```

```
tgtaccaaaa catccactta agttctttga tttgtaccat tccttcaaat aaagaaattt  900

ggtacccagg aaaaaaaaaa                                                920


<210>      4
<211>      2139
<212>      DNA
<213>      Homo sapiens

<400>      4

caggcgatac ttcctgttgc cgggacgcta tatataacgt gatgagcgca cgggctgcgg    60

agacgcaccg gagcgctcgc ccagccgccg cctccaagcc cctgaggttt ccggggacca   120

caatgaacaa cttgctgtgc tgcgcgcttc gtgtttctgg acatctccat taagtggacc   180

acccaggaaa cgtttcctcc aaagtacctt cattatgacg aagaaacctc tcatcagctg   240

ttgtgtgaca aatgtcctcc tggtacctac ctaaaacaac actgtacagc aaagtggaag   300

accgtgtgcg ccccttgccc tgaccactac tacacagaca gctggcacac cagtgacgag   360

tgtctatact gcagcccgt gtgcaaggag ctgcagtacg tcaagcagga gtgcaatcgc   420

acccacaacc gcgtgtgcga atgcaaggaa gggcgctacc ttgagataga gttctgcttg   480

aaacatagga gctgccctcc tggatttgga gtggtgcaag ctggaacccc agagcgaaat   540

acagtttgca aaagatgtcc agatgggttc ttctcaaatg agacgtcatc taaagcaccc   600

tgtagaaaac acacaaattg cagtgtcttt ggtctcctgc taactcagaa aggaaatgca   660

acacacgaca acatatgttc cggaaacagt gaatcaactc aaaaatgtgg aatagatgtt   720

accctgtgtg aggaggcatt cttcaggttt gctgttccta caaagtttac gcctaactgg   780

cttagtgtct tggtagacaa tttgcctggc accaaagtaa acgcagagag tgtagagagg   840

ataaaacggc aacacagctc acaagaacag actttccagc tgctgaagtt atggaaacat   900

caaaacaaag accaagatat agtcaagaag atcatccaag atattgacct ctgtgaaaac   960

agcgtgcagc ggcacattgg acatgctaac ctcaccttcg agcagcttcg tagcttgatg  1020

gaaagcttac cgggaaagaa agtgggagca gaagacattg aaaaaacaat aaaggcatgc  1080

aaacccagtg accagatcct gaagctgctc agtttgtggc gaataaaaaa tggcgaccaa  1140

gacaccttga agggcctaat gcacgcacta aagcactgca aagacgtacc actttcccaa  1200

aactgtcact cagagtctaa agaagaccat caggttcctt cacagcttca caatgtacaa  1260

attgtatcag aagttatttt tagaaatgat aggtaaccag gtccaatcag taaaaataag  1320

ctgcttataa ctggaaatgg ccattgagct gtttcctcac aattggcgag atcccatgga  1380

tgagtaaact gtttctcagg cacttgaggc tttcagtgat atctttctca ttaccagtga  1440

ctaattttgc cacagggtac taaaagaaac tatgatgtgg agaaaggact aacatctcct  1500

ccaataaacc ccaaatggtt aatccaactg tcagatctgg atcgttatct actgactata  1560

ttttcccta ttactgcttg cagtaattca actggaaatt aaaaaaaaaa aactagactc  1620

cattgtgcct tactaaatat gggaatgtct aacttaaata gctttgagat ttcagctatg  1680

ctagaggctt ttattagaaa gccatatttt tttctgtaaa agttactaat atatctgtaa  1740

cactattaca gtattgctat ttatattcat tcagatataa gatttgtaca tattatcatc  1800
```

```
ctataaagaa acggtatgac ttaattttag aaagaaaatt atattctgtt tattatgaca 1860

aatgaaagag aaaatatata tttttaatgg aaagtttgta gcatttttct aataggtact 1920

gccatatttt tctgtgtgga gtatttttat aattttatct gtataagctg taatatcatt 1980

ttatagaaaa tgcattattt agtcaattgt ttaatgttgg aaaacatatg aaatataaat 2040

tatctgaata ttagatgctc tgagaaattg aatgtacctt atttaaaaga ttttatggtt 2100

ttataactat ataaatgaca ttattaaagt tttcaaatt                        2139
```

```
<210>     5
<211>     157
<212>     DNA
<213>     Homo sapiens

<400>     5
```

```
cccaatacta agctcctctg gttagagcca gccatgagag aaactccaag tacttctgac    60

tggttctctc tctactcatc caccccttag gtggctgcag aaggaactct gtgcaacccc   120

cagagttctc attctcagtg acagggaaat gtaatga                            157
```

```
<210>     6
<211>     2263
<212>     DNA
<213>     Homo sapiens

<223>     unsure at all n locations
<400>     6
```

```
acctctgacc acaacaaacc cctactccac ccggtcttgt ttgtcccacc cttggtgacg    60

cagagcccca gcccagaccc cgcccaaagc actcatttaa ctggtattgc ggancacgag   120

gcttctgctt actgcaactc gctccggccg ctgggcgtag tgcgactcgg cggagtcccg   180

gcggcgcgtc cttgttctaa cccggcgcgc catgaccgtc gcgcggccga gcgtgcccgc   240

ggcgctgccc ctcctcgggg agctgccccg gctgctgctg ctggtgctgt tgtgcctgcc   300

ggccgtgtgg ggtgactgtg gccttccccc agatgtacct aatgcccagc cagctttgga   360

aggccgtaca agttttcccg aggatactgt aataacgtac aaatgtgaag aaagctttgt   420

gaaaattcct ggcgagaagg actcagtgat ctgccttaag ggcagtcaat ggtcagatat   480

tgaagagttc tgcaatcgta gctgcgaggt gccaacaagg ctaaattctg catccctcaa   540

acagccttat atcactcaga attattttcc agtcggtact gttgtggaat atgagtgccg   600

tccaggttac agaagagaac cttctctatc accaaaacta acttgccttc agaatttaaa   660

atggtccaca gcagtcgaat tttgtaaaaa gaaatcatgc cctaatccgg gagaaatacg   720

aaatggtcag attgatgtac caggtggcat attatttggt gcaaccatgc tccttctcat   780

gtaacacagg gtacaaatta tttggctcga cttctagttt ttgtcttatt tcaggcagct   840

ctgtccagtg gagtgacccg ttgccagagt gcagagaaat ttattgtcca gcaccaccac   900

aaattgacaa tggaataatt caaggggaac gtgaccatta tggatataga cagtctgtaa   960

cgtatgcatg taataaagga ttcaccatga ttggagagca ctctatttat tgtactgtga  1020

ataatgatga aggagagtgg agtggcccac cacctgaatg cagaggaaaa tctctaactt  1080
```

```
ccaaggtccc accaacagtt cagaaaccta ccacagtaaa tgttccaact acagaagtct 1140

caccaacttc tcagaaaacc accacaaaaa ccaccacacc aaatgctcaa gcaacacgga 1200

gtacacctgt ttccaggaca accaagcatt ttcatgaaac aaccccaaat aaaggaagtg 1260

gaaccacttc aggtactacc cgtcttctat ctgggcacac gtgtttcacg ttgacaggtt 1320

tgcttgggac gctagtaacc atgggcttgc tgacttagcc aaagaagagt taagaagaaa 1380

atacacacaa gtatacagac tgttcctagt ttcttagact tatctgcata ttggataaaa 1440

taaatgcaat tgtgctcttc atttaggatg ctttcattgt ctttaagatg tgttaggaat 1500

gtcaacagag caaggagaaa aaaggcagtc ctggaatcac attcttagca cacctacacc 1560

tcttgaaaat agaacaactt gcagaattga gagtgattcc tttcctaaaa gtgtaagaaa 1620

gcatagagat ttgttcgtat ttagaatggg atcacgagga aaagagaagg aaagtgattt 1680

ttttccacaa gatctgtaat gttatttcca cttataaagg aaataaaaaa tgaaaaacat 1740

tatttggata tcaaaagcaa ataaaaaccc aattcagtct cttctaagca aaattgctaa 1800

agagagatga accacattat aaagtaatct ttggctgtaa ggcattttca tctttccttc 1860

gggttggcaa aatattttaa aggtaaaaca tgctggtgaa ccaggggtgt tgatggtgat 1920

aagggaggaa tatagaatga aagactgaat cttcctttgt tgcacaaata gagtttggaa 1980

aaagcctgtg aaaggtgtct tctttgactt aatgtcttta aaagtatcca gagatactac 2040

aatattaaca taagaaaaga ttatatatta tttctgaatc gagatgtcca tagtcaaatt 2100

tgtaaatctt attcttttgt aatatttatt tatatttatt tatgacagtg aacattctga 2160

ttttacatgt aaaacaagaa aagttgaaga agatatgtga agaaaaatgt atttttccta 2220

aatagaaata aatgatccca ttttttggta aaaaaaaaaa aaa           2263


<210>     7
<211>     712
<212>     DNA
<213>     Homo sapiens

<400>     7

cttaaaccta tttagtaatg ttttcccaag tttatttttt attttttaatt ttttcccaa    60

gtttattttt ctatttttttt ttcatggaaa aatgggggtaa cttagcagtt tcaatattga   120

agactgaagt ttaaaaaaaa tttaaattca aggtactttt aaaattcagt tagaaaagta   180

ggctttaaaa attattagag acaagagtac caaagcggtg tgtgtatgtg tgtgtgtgta   240

tgcatgcttg tggattggaa aaactttgga gactgattac ttttcattat atatgtgtca   300

cagtgaaaca gctttttatgt gtcatgtaag attattgctt gcctctctaa ggaaggtcgt   360

gactgtttaa atagacgggc aaggtggaac cttttgaaag atgagctttt gaatataagt   420

tgtctgctag atcatggttt gtattgaact aacaaggttt gcagatctgc tgacttatat   480

aaagcttttt gattcctact aagctttaag atttaaaaaa tgttcaatgt tgaaatttct   540

gtggggctct attttttgctt tggctttctg gtgagagagt gaggaagcat tctttccttc   600

actaagtttg tctttcttgt cttctggata gattgatttt aagagactaa gggaatttac   660

aaactaaaga tttttagtcat ctggtggaaa aggagacttt aagattgttt ag           712
```

```
<210>    8
<211>    1474
<212>    DNA
<213>    Homo sapiens

<400>    8

ctcagtggat aaaagaccta gagaatgtgt atcccagaag aagctggcca aggatatggg    60

agcaaccacc atgggaccag aagtctctct ggggcaggtg tagtggtctt gctgcttctc   120

cagggaggga tctgcctaca aactggtttg ctactttacc aactgggtcc caggaccggc   180

aggaaccagg aaaattcacc cctgaggaat attgacccct tcctatgctc tcatctcatc   240

tattcattgc gccagcatcg aaaacaacaa ggttatcatc aaggacaaga gtgaagtgat   300

gctctaccag accatcaaca gttctcaaaa ccaagaatcc caaactgaaa attctcttgt   360

ccattggagg gtacctgttt ggttccaaag ggttccaccc tatggtggat tcttctacat   420

cacgcttgga attcattaac tccataatcc tgtttctgag gaaccataac tttgatggac   480

tggatgtaag ctggatctac ccagatcaga agaaaaacac tcatttcact gtgctgattc   540

atgagttagc agaagccttt cagaaggact tcacaaaatc caccaaggaa aggcttctct   600

tgactgcggg gggtatctgc agggaggcaa atgattgata acagctatca agttgagaaa   660

ctggcaaaag atctggattt catcaacctc ctgtcctttg acttccatgg gtcttgggaa   720

aagcccctta tcactggcca caacagccct gctgagcaag gggtggcagg acagagggcc   780

aagctcctac tacaatgtgg aatatgctgt ggggtactgg atacataagg gaatgccatc   840

agagaaggtg gtcatgggca tccccacata tggggcactc cttcacactg gcctctgcag   900

aaaccaccgt gggggcccct gcctctggcc ctggagctgc tggacccatc acagagtctt   960

caggcttcct ggcctattat gagatctgcc agttcctgaa aggagccaag atcacgcggc  1020

tccaggatca gcaggttccc tacgcagtca aggggaacca gtgggtgggc tatgatgatg  1080

tgaagagtat ggagaccaag gttcagttct aaagaatt aaacctggga ggagccatga  1140

tctggtctat tgacatggat gacttcactg gcaaatcctg caaccagggc ccttaccctc  1200

ttgtccaagc agtcaagaga agccttggct ccctgtgaag gattaactta cagagaagca  1260

ggcaagatga ccttgctgcc tggggcctgc tctctcccag gaattctcat gtgggattcc  1320

ccttgccagg ccggcctttg gatctctctt ccaagccttt cctgacttcc tcttagatca  1380

tagattggac ctggtttgt tttcctgcag ctgttgactt gttgccctga agtacaataa  1440

aaaaaattca ttttgctcca gtaaaaaaaa aaaa                              1474


<210>    9
<211>    592
<212>    DNA
<213>    Homo sapiens

<223>    unsure at all n locations
<400>    9

actttcctgg tgacgctttg ctttctcttct gctcttggtg agaaagtgcc tccttcttcc    60

caggatcagg acctctgcca tccagcgcca caaagagaca tttctgcaca cacactnnnn   120

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnccagagac aaacttaagg tgaggagaaa   180
```

```
gagcgctagt ttcacttgat ctccagcttc caacttaagc agaacttgag agcatccgaa    240

ctcctggatt tcaggacaag tgaagaagat tctttgggct ataaagatga agagtctact    300

tcttctggtg ctgatttcaa tctgctgggc tgatcatctt tcagacaact atactctgga    360

tcatgacaga gctattcaca tccaagcaga aaatgggccc ccatctactt gtggaagcag    420

agcaagccaa ggtgtttca caccagaggt ggcaatgtta cactgccatg taaattttat    480

cgagaccta cagcatttgg ctcaggaatc cataaaatcc gaattaagtg gaccaagcta    540

acttcggatt acctcaagga agtggatgtt tttgtttcca tgggatacca ca           592
```

```
<210>      10
<211>      2004
<212>      DNA
<213>      Homo sapiens

<400>      10
```

```
gcgaccgccc cctgtgatcc agcgagcgcg gtcgtccttg gtggaaggaa ccatgaactg     60

gcatctcccc ctcttcctct tggcctctgt gacgctgcct tccatctgct cccacttcaa    120

tcctctgtct ctcgaggaac taggctccaa cacgggatc caggttttca atcagattgt    180

gaagtcgagg cctcatgaca acatcgtgat ctctccccat gggattgcgt cggtcctggg    240

gatgcttcag ctgggggcgg acggcaggac caagaagcag ctcgccatgg tgatgagata    300

cggcgtaaat ggagttggta aaatattaaa gaagatcaac aaggccatcg tctccaagaa    360

gaataaagac attgtgacag tggctaacgc cgtgtttgtt aagaatgcct ctgaaattga    420

agtgcctttt gttacaagga caaagatgt gttccagtgt gaggtccgga atgtgaactt    480

tgaggatccc agcctctgcc tgtgattcca tcaatgcatg ggttaaaaac gaaaccaggg    540

atatgattga caatctgctg tccccagatc ttattgatgg tgtgctcacc agactggtcc    600

tcgtcaacgc agtgtatttc aagggtctgt ggaaatcacg gttccaaccc gagaacacaa    660

agaaacgcac tttcgtggca gccgacggga atcctatca agtgccaatg ctggcccagc    720

tctccgtgtt ccggtgtggg tcgacaagtg cccccaatga tttatggtac aacttcattg    780

aactgcccta ccacggggaa agcatcagca tgctgattgc actgccgact gagagctcca    840

ctccgctgtc tgccatcatc ccacacatca gcaccaagac catagacagc tggatgagca    900

tcatggtgcc caagagggtg caggtgatcc tgcccaagtt cacagctgta gcacaaacag    960

atttgaagga gccgctgaaa gttcttggca ttactgacat gtttgattca tcaaaggcaa   1020

attttgcaaa aataacaagg tcagaaaacc tccatgtttc tcatatcttg caaaaagcaa   1080

aaattgaagt cagtgaagat ggaaccaaag cttcagcagc aacaactgca attctcattg   1140

caagatcatc gcctccctgg tttatagtag acagaccttt tctgtttttc atccgacata   1200

atcctacagg tgctgtgtta ttcatggggc agataaacaa accctgaaga gtatacaaaa   1260

gaaaccatgc aaagcaacga ctactttgct acgaagaaag actcctttcc tgcatctttc   1320

atagttctgt taaatatttt tgtacatcgc ttctttttca aaactagttc ttaggaacag   1380

actcgatgca agtgtttctg ttctgggagg tattggaggg aaaaaacaag caggatggct   1440

ggaacactgt actgaggaat gaatagaaag gcttccagat gtctaaaaga ttctttaaac   1500
```

```
tactgaactg ttacctaggt taacaaccct gttgagtatt tgctgtttgt ccagttcagg 1560

aatttttgtt ttgtttgtc tatatgtgcg gctttcaga agaaatttaa tcagtgtgac 1620

agaaaaaaa atgtttatg gtagctttta cttttatga aaaaaaatt atttgccttt 1680

taaattcttt tcccccatcc ccctccaaag tcttgatagc aagcgttatt ttgggggtag 1740

aaacggtgaa atctctagcc tctttgtgtt tttgttgttg ttgttgttgt tgttttatat 1800

aatgcatgta ttcactaaaa taaaatttaa aaaactcctg tcttgctaga caaggttgct 1860

gttgtgcagt gtgcctgtca ctactggtct gtactccttg gatttgcatt tttgtatttt 1920

gtacaaagta aaaataaact gttatgagta gtaaaaataa agctatttct ctgctatttg 1980

aaaataaaaa aaaaaaaaaa aaaa                                        2004


<210>      11
<211>      2128
<212>      DNA
<213>      Homo sapiens

<400>      11

agactgccgg agagcgcgct ctgcctgccg cctgcctgcc tgccactgag ggttcccagc   60

accatgaggg cctggatctt ctttctcctt tgcctggccg ggagggcctt ggcagcccct  120

cagcaagaag ccctgcctga tgagacagag gtggtggaag aaactgtggc agaggtgact  180

gaggtatctg tgggagctaa tcctgtccag gtggaagtag gagaatttga tgatggtgca  240

gaggaaaccg aagaggaggt ggtggcggaa aatccctgcc agaaccacca ctgcaaacac  300

ggcaaggtgt gcgagctgga tgagaacaac acccccatgt gcgtgtgcca ggaccccacc  360

agctgcccag cccccattgg cgagtttgag aaggtgtgca gcaatgacaa caagaccttc  420

gactcttcct gccacttctt tgccacaaag tgcaccctgg agggcaccaa gaagggccac  480

aagctccacc tggactacat cgggccttgc aaatacatcc cccttgcct ggactctgag  540

ctgaccgaat ccccctgcg catgcgggac tggctcaaga acgtcctggt caccctgtat  600

gagagggatg aggacaacaa ccttctgact gagaagcaga agctgcgggt gaagaagatc  660

catgagaatg agaagcgcct ggaggcaggg agaccacccc gtggagctgc tggcccggga  720

cttcgagaag aactataaca tgtacatctt ccctgtacac tggcagttcg gccagctgga  780

ccagcacccc attgacgggt acctctccca caccgagctg gctccactgc gtgctcccct  840

catccccatg gagcattgca ccacccgctt tttcgagacc tgtgacctgg acaatgacaa  900

gtacatcgcc ctggatgagt gggccggctg cttcggcatc aagcagaagg atatcgacaa  960

ggatcttgtg atctaaatcc actccttcca cagtaccgga ttctctcttt aaccctcccc 1020

ttcgtgtttc ccccaatgtt taaaatgttt ggatggtttg ttgttctgcc tggagacaag 1080

gtgctaacat agatttaagt gaatacatta acggtgctaa aaatgaaaat tctaacccaa 1140

gacatgacat tcttagctgt aacttaacta ttaaggcctt ttccacacgc attaatagtc 1200

ccattttct cttgccattt gtagctttgc ccattgtctt attggcacat gggtggacac 1260

ggatctgctg ggctctgcct taaacacaca ttgcagcttc aacttttctc tttagtgttc 1320
```

```
tgtttgaaac taatacttac cgagtcagac tttgtgttca tttcatttca gggtcttggc 1380

tgcctgtggg ctttccccag ggtggcctgg gaggtgggca aagggaagta acagacacac 1440

gatgttgtca aggatggttt tgggactaga ggctcagtgg tgggagagat ccctgcagaa 1500

cccaccaacc agaacgtggt ttgcctgagg ctgtaactga gagaaagatt ctggggctgt 1560

cttatgaaaa tatagacatt ctcacataag cccagttcat caccatttcc tcctttacct 1620

ttcagtgcag tttcttttca cattaggctg ttggttcaaa cttttgggag cacggactgt 1680

cagttctctg ggaagtggtc agcgcatcct gcagggcttc tcctcctctg tcttttggag 1740

aaccagggct cttctcaggg gctctaggga ctgccaggct gtttcagcca ggaaggccaa 1800

aatcaagagt gagatgtaga aagttgtaaa atagaaaaag tggagttggt gaatcggttg 1860

ttctttcctc acatttggat gattgtcata aggtttttag catgttcctc cttttcttca 1920

ccctcccctt tgttcttcta ttaatcaaga gaaacttcaa agttaatggg atggtcggat 1980

ctcacaggct gagaactcgt tcacctccaa gcatttcatg aaaaagctgc ttcttattaa 2040

tcatacaaac tctcaccatg atgtgaagag tttcacaaat cttttcaaaat aaaaagtaat 2100

gacttagaaa ctgcaaaaaa aaaaaaaa                                    2128
```

<210>   12
<211>   2073
<212>   DNA
<213>   Homo sapiens

<400>   12

```
agtacacact ggggcttata gggactgagc ctactcaagg gtatatggtg ctgtgggtca    60

gagctggggc atggcaggcg attcagtgtg ccttgactcc ccctgtaaat gttcctctca   120

gaagccttct tggccttcca gcccttggtt tttgagacaa ccagcagtca tttgttcgtt   180

cctgacattc cttcctgtcc cttccttcca ggttctgtgg acaatcacaa tgggaatcca   240

aggagggtct gtcctgttcg ggctgctgct cgtcctggct gtcttctgcc attcaggtca   300

tagcctgcag tgctacaact gtcctaaccc aactgctgac tgcaaaacag ccgtcaattg   360

ttcatctgat tttgatgcgt gtctcattac caaagctggg ttacaagtgt ataacaagtg   420

ttggaagttt gagcattgca atttcaacga cgtcacaacc ccgcttgagg gaaaatgagc   480

taacgtacta ctgctgcaag aaggacctgt gtaactttaa cgaacagctt gaaaatggtg   540

ggacatcctt atcagagaaa acagttcttc tgctggtgac tccatttctg gcagcagcct   600

ggagccttca tccctaagtc aacaccagga gagcttctcc caaactcccc gttcctgcgt   660

agtccgcttt ctcttgctgc cacattctaa aggcttgata ttttccaaat ggatcctgtt   720

gggaaagaat aaaattagct tgagcaacct ggctaagata gaggggctct gggagacttt   780

gaagaccagt cctgtttgca gggaagcccc acttgaagga agaagtctaa gagtgaagta   840

ggtgtgactt gaactagatt gcatgcttcc tcctttgctc ttgggaagac cagctttgcc   900

agtgacagct tgagtgggtt ctctgcagcc ctcagattat ttttcctctg gctccttgga   960

tgtagtcagt tagcatcatt agtacatctt tggagggtgg ggcaggagta tatgagcatc  1020

ctctctcaca tggaacgctt tcataaactt cagggatccc gtgttgccat ggaggcatgc  1080
```

caaatgttcc atatgtgggt gtcagtcagg gacaacaaga tccttaatgc agagctagag 1140

gacttctggc agggaagtgg ggaagtgttc cagatagcag ggcatgaaaa cttagagagg 1200

tacaagtggc tgaaaatcga gtttttcctc tgtctttaaa ttttatatgg gctttgttat 1260

cttccactgg aaaagtgtaa tagcatacat caatggtgtg ttaaagctat ttccttgcct 1320

ttttttttatt ggaatggtag gatatcttgg ctttgccaca cacagttaca gagtgaacac 1380

tctactacat gtgactggca gtattaagtg tgcttatttt aaatgttact ggtagaaagg 1440

cagttcaggt atgtgtgtat atagtatgaa tgcagtgggg acaccctttg tggttacagt 1500

ttgagacttc caaaggtcat ccttaataac aacagatctg caggggtatg ttttaccatc 1560

tgcatccagc ctcctgctaa ctcctagctg actcagcata gattgtataa aatacctttg 1620

taacggctct tagcacactc acagatgttt gaggctttca gaagctcttc taaaaaatga 1680

tacacacctt tcacaagggc aaacttttc cttttccctg tgtattctag tgaatgaatc 1740

tcaagattca gtagacctaa tgacatttgt attttatgat cttggctgta tttaatggca 1800

taggctgact tttgcagatg gaggaatttc ttgattaatg ttgaaaaaaa acccttgatt 1860

atactctgtt ggacaaaccg agtgcaatga atgatgcttt tctgaaaatg aaatataaca 1920

agtgggtgaa tgtggttatg gccgaaaagg atatgcagta tgcttaatgg tagcaactga 1980

aagaagacat cctgagcagt gccagctttc ttctgttgat gccgttccct gaacatagga 2040

aaatagaaac ttgcttatca aaacttaaaa aaa   2073

<210>   13
<211>   253
<212>   DNA
<213>   Homo sapiens

<400>   13

gctggctact tctcgctctg cttcatccca ctattatttt ggcacaacag gaagctgttg   60

aaggaggatg ttcccatctt ggtcagtcct atgcggatag agatgtctgg aagccagaac 120

catgccaaat atgtgtctgt gactcaggat ccgttctctg cgatgacata atatgtgacg 180

atcaagaatt agactgcccc aacccagaaa ttccatttgg agaatgttgt gcagtttgcc 240

cacagcctcc aag   253

<210>   14
<211>   1749
<212>   DNA
<213>   Homo sapiens

<223>   unsure at all n locations
<400>   14

tcatgtctgc gagccaggat tcccgatcca gagacaatgg ccccgatggg atggagcccg   60

aaggcgtcca tcgagagtaa ctggaatgag attgttgaca gctttgatga catgaacctc 120

tcggagtccc ttctccgtgg catctacgcc tatggttttg agaagccctc tgccatccag 180

cagcgagcca ttctaccttg tatcaagggt tatgatgtga ttgctcaagc ccaatctggg 240

actgggaaaa cggccacatt tgccatatcg attctgcagc agattgaatt agatctaaaa 300

gccacccagg ccttggtcct agcacccact cgagaattgg ctcagcagat acagaaggtg 360

```
gtcatggcac taggagacta catgggcgcc tcctgtcacg cctgtatcgg gggcaccaac  420

gtgcgtgctg aggtgcagaa actgcagatg gaagctcccc acatcatcgt gggtacccct  480

ggccgtgtgt ttgatatgct taaccggaga tacctgtccc ccaaatacat caagatgttt  540

gtactggatg aagctgacga aatgttaagc cgtggattca aggaccagat ctatgacata  600

ttccaaaagc tcaacagcaa cacccaggta gttttgctgt cagccacaat gccttctgat  660

gtgcttgagg tgaccaagaa gttcatgagg accccattc ggattcttgt caagaaggaa  720

gagttgaccc tggagggtat ccgccagttc tacatcaacg tggaacgaga ggagtggaag  780

ctggacacac tatgtgactt gtatgaaacc ctgaccatca cccaggcagt catcttcatc  840

aacacccgga ggaaggtgga ctggctcacc gagaagatgc atgctcgaga tttcactgta  900

tccgccatgc atggagatat ggaccaaaag gaacgagacg tgattatgag ggagtttcgt  960

tctggctcta gcagagtttt gattaccact gacctgctgg ccagaggcat tgatgtgcag  1020

caggtttctt tagtcatcaa ctatgacctt cccaccaaca gggaaaacta tatccacaga  1080

atcggtcgag gtggacggtt tggccgtaaa ggtgtggcta ttaacatggt gacagaagaa  1140

gacaagagga ctcttcgaga cattgagacc ttctacaaca cctccattga ggaaatgccc  1200

ctcaatgttg ctgacctcat ctgaggggct gtcctgccac ccagccccag ccagggctca  1260

atctctgggg gctgaggagc agcaggaggg gggagggaag ggagccaagg gatggcatc   1320

ttgtcatttt ttttctttga ataaatgtca cttttgagg caaaagaagg aaccgtgaac  1380

attttagaca cccttttctt tggggtaggc tcttgcccca ggcgncggct cttctccnaa  1440

aaaaaaaaaa cactaatcca tttccctaac ctagtaacct ccagatccca gaggctctcc  1500

tcacctcagc tgagctcctt tgaaagtgat tcaagggact atgtcactca gcctcatttg  1560

ctggaccaaa tctggaggga gaacccctaa aacccctaag tgaggttgcc caggggggttg  1620

tccccaggtg gggggaagca ggggagagaa aatggtagcc atttttacat tgttttgtat  1680

agtatttatt gattcaggaa acaaacacaa aattctgaat aaaatgactt ggaaactgaa  1740

aaaaaaaaa                                                          1749
```

<210>   15
<211>   1232
<212>   DNA
<213>   Homo sapiens

<400>   15

```
ttacactccg ctcggctcac catgtgtcac tctcgcagct gccacccgac catgaccatc   60

ctgcaggccc cgaccccggc cccctccacc atcccgggac cccggcgggg ctccggtcct  120

gagatcttca ccttcgaccc tctcccggag cccgcagcgg cccctgccgg cgcgccccagc  180

gcctctcgcg ggcaccgaaa gcgcagccgc agggttctct accctcgagt ggtccggcgc  240

cagctgccag tcgaggaacc gaacccagcc aaaaggcttc tctttctgct gctcaccatc  300

gtcttctgcc agatcctgat ggctgaagag ggtgtgccgg cgcccctgcc tccaagagga  360

cgcccctaac gccgcatccc tgggcgccca ccctgtgtc ccccgtcctc gagcccttta  420

atctgacttc ggagccctcg gactacgctc tggacctcag cactttcctc cagcaacacc  480
```

```
cggccgcctt ctaactgtga ctccccgcac tccccaaaaa gaatccgaaa aaccacaaag   540

aaacaccagg cgtacctggt gcgcgagagc gtatccccaa ctgggacttc cgaggcaact   600

tgaactcaga acactacagc ggagacgcca cccggtgctt gaggcgggac cgaggcgcac   660

agagaccgag gcgcatagag accgaggcac agcccagctg ggggctaggc ccggtgggaa   720

ggagagcgtc gttaatttat ttcttattgc tcctaattaa tatttatatg tatttatgta   780

cgtcctccta ggtgatggag atgtgtacgt aatatttatt ttaacttatg caagggtgtg   840

agatgttccc cctgctgtaa atgcaggtct cttggtattt attgagcttt gtgggactgg   900

tggaagcagg acacctggaa ctgcggcaaa gtaggagaag aaatggggag gactcgggtg   960

ggggaggacg tcccggctgg gatgaagtct ggtggtgggt cgtaagttta ggaggtgact  1020

gcatcctcca gcatctcaac tccgtctgtc tactgtgtga gacttcggcg gaccattagg  1080

aatgagatcc gtgagatcct tccatcttct tgaagtcgcc tttagggtgg ctgcgaggta  1140

gagggttggg ggttggtggg ctgtcacgga gcgactgtcg agatcgccta gtatgttctg  1200

tgaacacaaa taaaattgat ttactgtctg ca                                1232
```

<210>   16
<211>   1678
<212>   DNA
<213>   Homo sapiens

<400>   16

```
gtcgccagga ggagcgcgcg ggcacagggt gcgctgaccg aggcgtgcaa agactccaga    60

attggaggca tgatgaagac tctgctgctg tttgtggggc tgctgctgac ctgggagagt   120

gggcaggtcc tggggggacca dacggtctca gacaatgagc tccaggaaat gtccaatcag   180

ggaagtaagt acgtcaataa ggaaattcaa aatgctgtca cgggggtgaa acagataaag   240

actctcatag aaaaaacaaa cgaagagcgc aagacactgc tcagcaacct agaagaagcc   300

aagaagaaga aagaggatgc cctaaatgag accagggaat cagagacaaa gctgaaggag   360

ctcccaggag tgtgcaatga gaccatgatg gccctctggg aagagtgtaa gccctgcctg   420

aaacagacct gcatgaagtt ctacgcacgc gtctgcagaa gtggctcagg cctggttggc   480

cgccagcttg aggagttcct gaaccagagc tcgcccttct acttctggat gaatggtgac   540

cgcatcgact ccctgctgga gaacgaccgg cagcagacgc acatgctgga tgtcatgcag   600

gaccacttca gccgcgcgtc cagcatcata gacgagctct ccaggacag gttcttcacc   660

cgggagcccc aggataccta ccactacctg cccttcagcc tgccccaccg gaggcctcac   720

ttcttctttc ccaagtcccg catcgtccgc agctttgatg cccttctctc cgtacgagcc   780

cctgaacttc cacgccatgt tccagccctt ccttgagatg atacacgagg ctcagcaggc   840

catggacatc cacttccata gcccggcctt ccagcacccg ccaacagaat tcatacgaga   900

aggcgacgat gaccggactg tgtgccggga gatccgccac aactccacgg gctgcctgcg   960

gatgaaggac cagtgtgaca agtgccggga gatcttgtct gtgggactgt tccaccaaca  1020

acccctccca ggctaagctg cggcgggagc tcgacgaatc cctccaggtc gctgagaggt  1080

tgaccaggaa atacaacgag ctgctaaagt cctaccagtg gaagatgctc aacacctcct  1140
```

```
ccttgctgga gcagctgaac gagcagttta actgggtgtc ccggctggca aacctcacgc 1200

aaggcgaaga ccagtactat ctgcgggtca ccacggtggc ttcccacact tctgactcgg 1260

acgttccttc cggtgtcact gaggtggtcg tgaagctctt tgactctgat cccatcactg 1320

tgacggtccc tgtagaagtc tccaggaaga accctaaatt tatggagacc gtggcggaga 1380

aagcgctgca ggaataccgc aaaaagcacc gggaggagtg agatgtggat gttgcttttg 1440

cacctacggg ggcatctgag tccagctccc cccaagatga gctgcagccc cccagagaga 1500

gctctgcacg tcaccaagta accaggcccc agcctccagg cccccaactc cgcccagcct 1560

ctccccgctc tggatcctgc actctaacac tcgactctgc tgctcatggg aagaacagaa 1620

ttgctcctgc atgcaactaa ttcaataaaa ctgtcttgtg agctgaaaaa aaaaaaaa   1678
```

```
<210>       17
<211>       1854
<212>       DNA
<213>       Homo sapiens

<400>       17
```

```
gtctagtgag ggacagacca agcacgcaaa acaaattgca atataatgtg ataagttctt    60

taaaagaggt aagagcaacg tgctttggga gcagagaaga gggagaaagc agcatcttgc   120

ctggatgagc caggggacac agaagagaag cccactatct catttaatct ttacaactct   180

cttgcaaggt tccctgggtt gtgaaaatac atgagataaa tcatgaaggc cactatcatc   240

ctccttctgc ttgcacaagt ttcctggggc tggaccgttt caacagagag gcttatttga   300

ctttatgcta ggaagatgag gcttctgggg ataggcccag aagttcctga tgaccgcgac   360

ttcgagcccc tccctagggc ccagtgtgcc ccttccgctg tcaatgccat cttcgagtgg   420

tccagtgttc tgatttgggt ctggacaaag tgccaaagga tcttccccct gacacaactc   480

tgctagacct gcaaaacaac aaaataaccg aaatcaaaga tggagacttt aagaacctga   540

agaaccttca cgcattgatt cttgtcaaca ataaaattag gcaaagttag tcctgggagc   600

atttacacct ttggtgaaag ttggaacgac tttatctgtc caagaatcag ctgaaggaat   660

tgccagaaaa aatgcccaaa actcttcagg agctgcgtgc ccatgagaat gagatcacca   720

aagtgcgaaa agttactttc aatggactga accagatgat tgtcatagga actgggcacc   780

aatccgctga agagctcagg aattgaaaat ggggctttcc agggaatgaa ggaagctctc   840

ctacatccgc attgctgata ccaatatcac cagcattcct caaggtcttc ctccttccct   900

tacgggaatt acatcttgat ggcaacaaaa tcagcagagt tgatgcagct agcctgaaag   960

gactgaataa tttggctaag ttgggattga gtttcaacag catctctgct gttgacaatg  1020

gctctctggc caacacgcct catctgaggg agcttcactt ggacaacaac aagcttacca  1080

gagtacctgg tgggctggca gagcataagt acatccaggt tgtctacctt cataacaaca  1140

atatctctgt agttggatca agtgacttct gcccacctgg acacaacacc aaaaaggctt  1200

cttattcggg tgtgagtctt ttcagcaacc cggtccagta ctgggagata cagccatcca  1260

ccttcagatg tgtctacgtg cgctctgcca ttcaactcgg aaactataag taattctcaa  1320

gaaagccctc atttttataa cctggcaaaa tcttgttaat gtcattgcta aaaataaat   1380
```

```
aaaagctaga tactggaaac ctaactgcaa tgtggatgtt ttacccacat gacttattat 1440

gcataaagcc aaatttccag tttaagtaat tgcctacaat aaaaagaaat tttgcctgcc 1500

attttcagaa tcatcttttg aagctttctg ttgatgttaa ctgagctact agagatattc 1560

ttatttcact aaatgtaaaa tttggagtaa atatatatgt caatatttag taaagctttt 1620

cttttttaat ttccaggaaa aaataaaaag agtatgagtc ttctgtaatt cattgagcag 1680

ttagctcatt tgagataaag tcaaatgcca aacactagct ctgtattaat ccccatcatt 1740

actggtaaag cctcatttga atgtgtgaat tcaatacagg ctatgtaaaa tttttactaa 1800

tgtcattatt ttgaaaaaat aaatttaaaa atacattcaa aattaaaaaa aaaa      1854
```

```
<210>    18
<211>    1585
<212>    DNA
<213>    Homo sapiens

<400>    18
```

```
gattcggcac gatggaatcc accagctaca tccagctccc tgaggcagag ttgagaatgg   60

agagaatgtt acctctcctg actctggggc tcttggcggc tgggttctgc cctgctgtcc  120

tctgccaccc taacagccca cttgacgagg agaatctgac ccagggagaa ccaagaccga  180

gggacacacg tggacctcgg attagcctcc gccaacgtgg gacttcgctt tcagcctgta  240

caagcagtta gtcctgaaag gcccctgata agaatgtcat cttctcccca ctgaggcatc  300

tccaccgcct tggccttcct gtctctgggg ggcccataat accaccctgg acagagattc  360

tcaaaggcct caagttcaac ctcacggaga cttctgaggc agaaattcac cagagctttc  420

cagcacctcc tgcgcaccct caatcagtcc agcgatgagc tgcaagctga gtatgggaaa  480

tgccatgttt gtcaaagagc aactcagtct gctggacagg ttcacggagg atgccaagag  540

gctgtatggc tccgaggcct ttgccactga cttttcaggac tcagctgcag ctaagaagct  600

catcaacgac tacgtgaaga atggaactag ggggaaaatc acagatctga tcaaggacct  660

tgactcgcag acaatgatgg tcctggtgaa ttacatcttc tttaaagcca aatgggagat  720

gcccttt gac ccccaagata ctcatcagtc aaggttctac ttgagcaaga aaaagtgggt  780

aatggtgccc atgatgagtt tgcatcacct gactatacct tacttccggg acgaggagct  840

gtcctgcacc gtggtggagc tgaagtacac aggcaatgcc agcgcactct tcatcctccc  900

tgatcaagac aagatggagg aagtggaagc catgctgctc ccagagaccc tgaagcggtg  960

gagagactct ctggagttca gagagatagg tgagctctac ctgccaaagt tttccatctc 1020

gagggactat aacctgaacg acatacttct ccagctgggc attgaggaag ccttcaccag 1080

caaggctgac ctgtcaggga tcacaggggc caggaaccta gcagtctccc aggtggtcca 1140

taaggctgtg cttgatgtat ttgaggaggg cacagaagca tctgctgcca cagcagtcaa 1200

aatcaccctc ctttctgcat tagtggagac aaggaccatt gtgcgtttca acaggccctt 1260

cctgatgatc attgtccctt acagacaccc agaacatctt cttcatgagc aaagtcacca 1320

atcccaagca agcctagagc ttgccatcaa gcagtggggc tctcagtaag gaacttggaa 1380

tgcaagctgg atgcctgggt ctctgggcac agcctggccc ctgtgcaccg agtggccatg 1440
```

```
gcatgtgtgg ccctgtctgc ttatccttgg aaggtgacag cgattccctg tgtagctctc 1500

acatgcacag gggcccatgg actcttcagt ctggagggtc ctgggcctcc tgacagcaat 1560

aaataatttc gttggacacg ttaaa                                    1585
```

<210>   19
<211>   1390
<212>   DNA
<213>   Homo sapiens

<400>   19

```
ggcaccacca ctaacctggg acagtgaatc gacaatgccg tcttctgtct cgtggggcat   60

cctcctgctg gcaggcctgt gctgcctggt ccctgtctcc ctggctgagg atccccaggg  120

agatgctgcc cagaagacag atacatccca ccatgatcag gatcacccaa ccttcaacaa  180

gatcaccccc aacctggctg agttcgcctt cagcctatac cgccagctgg cacaccagtc  240

caacagcacc aatatcttct tctccccagt gagcatcgct acagcctttg caatgctctc  300

cctgggggac caaggctgac actcacgatg aaatcctgga gggcctgaat ttcaacctca  360

cggagattcc ggaggctcag atccatgaag gcttccagga actcctccgt accctcaacc  420

agccagacag ccagctccag ctgaccaccg gcaatggcct gttcctcagc gagggcctga  480

agctagtgga taagtttttg gaggatgtta aaaagttgta ccactcagaa gccttcactg  540

tcaacttcgg ggacaccgaa gaggccaaga aacagatcaa cgattacgtg gagaagggta  600

ctcaagggaa aattgtggat ttggtcaagg agcttgacag agacacagtt tttgctctgg  660

tgaattacat cttctttaaa ggcaaatggg agagaccctt gaagtcaag gacaccgagg  720

aagaggactt ccacgtggac caggtgacca ccgtgaaggt gcctatgatg aagcgtttag  780

gcatgtttaa catccagcac tgtaagaagc tgtccagctg ggtgctgctg atgaaatacc  840

tggggcaatg ccaccgccat cttcttcctg cctgatgagg ggaaactaca gcacctggaa  900

aatgaactca cccacgatat catcaccaag ttcctggaaa atgaagacag aaggtctgcc  960

agcttacatt tacccaaact gtccattact ggaacctatg atctgaagag cgtcctgggt 1020

caactgggca tcactaaggt cttcagcaat ggggctgacc tctccggggt cacagaggag 1080

gcacccctga agctctccaa ggccgtgcat aaggctgtgc tgaccatcga cgagaaaggg 1140

actgaagctg ctggggccat gttttttagag gccatacca tgtctatccc ccccgaggtc 1200

aagttcaaca aacccttgt cttcttaatg attgaacaaa ataccaagtc tcccctcttc 1260

atgggaaaag tggtgaatcc cacccaaaaa taactgcctc tcgctcctca accctccc 1320

tccatccctg gccccctccc tggatgacat taaagaaggg ttgagctggt ccctgcctgc 1380

atgtgactgt                                                        1390
```

<210>   20
<211>   1534
<212>   DNA
<213>   Homo sapiens

<400>   20

```
ggaagatccc aacagtttgc gccataaata taactttatc gcggacgtgg tggagaagat   60
```

```
cgcccctgcc gtggttcata tcgaattgtt tcgcaagctt ccgtttttcta aacgagaggt    120

gccggtggct agtgggtctg ggtttattgt gtcggaagat ggactgatcg tgacaaatgc    180

ccacgtggtg accaacaagc accgggtcaa agttgagctg aagaacggtg ccacttacga    240

agccaaaatc aaggatgtgg atgagaaagc agacatcgca ctcatcaaaa ttgaccacca    300

gggcaagctg cctgtcctgc tgcttggccg ctcctcagag ctgcggccgg gagagttcgt    360

ggtcgccatc ggaagcccgt tttcccttca aaacacagtc accaccggga tcgtgagcac    420

cacccagcga ggcggcaaag agctggggct ccgcaactca gacatggact acatccagac    480

cgacgccatc atcaactatg ggaaactccg ggaggcccgt tagtaaacct ggacggtgaa    540

gtgattggaa ttaacacttt gaaagtgaca gctggaatct cctttgcaat cccatctgat    600

aagattaaaa agttcctcac ggagtcccat gaccgacagg ccaaaggaaa agccatcacc    660

aagaagaagt atattggtat ccgaatgatg tcactcacgt ccagcaaagc caaagagctg    720

aaggaccggc accgggactt cccagacgtg atctcaggag cgtatataat tgaagtaatt    780

cctgataccc cagcagaagc tggtgggtct caaggaaaac gacgtcataa tcagcatcaa    840

tggacagtcc gtggtctccg ccaatgatgt cagcgacgtt cattaaaagg gaaagcaccc    900

tgaacatggt ggtccgcagg ggtaatgaag atatcatgat cacagtgatt cccgaagaaa    960

ttgacccata ggcagaggca tgagctggac ttcatgtttc cctcaaagac tctcccgtgg   1020

gatgacggat gaggactctg ggctgctgga ataggacact caagactttt gactgccatt   1080

ttgtttgttc agtggagact ccctggccaa cagaatcctt cttgatagtt tgcaggcaaa   1140

acaaatgtaa tgttgcagat ccgcaggcag aagctctgcc ccttctgtat cctatgtatg   1200

cagtgtgctt tttcttgcca gcttgggcca ttcttgctta gacagtcagc atttgtctcc   1260

tcctttaact gagtcatcat cttagtccaa ctaatgcagt cgatacaatg ccgtagatag   1320

aagaagcccc acgggagcca ggatgggact ggtcgtgttt gtgctttttct ccaagtcagc   1380

acccaaaggt caatgcacag agaccccggg tgggtgagcg ctggcttctc aaacggccga   1440

agttgcctct tttaggaatc tctttggaat tgggagcacg atgactctga gtttgagcta   1500

ttaaagtact tcttacacat tgaaaaaaaa aaaa                                1534
```

```
<210>     21
<211>     2559
<212>     DNA
<213>     Homo sapiens

<223>     unsure at all n locations
<400>     21
```

```
agctgtcgga gcggttagtt cgatttcgag ctcgaggttt ccccgccgc caggtgnact     60

tctcatcgct tgttttttctt tttgcatttt tcctcccacc gccgttgccg ccctccccgt    120

cctggccgtc cgccctccgc cctctgcagg gacatctcta caccgttccc atccgggaac    180

agggcaacat ctacaagccc aacaacaagg ccatggcaga cgagctgagc gagaagcaag    240

tgtacgacgc gcacaccaag gagatcgacc tggtcaaccg cgaccctaaa cacctcaacg    300

atgacgtggt caagattgac tttgaagatg tgattgcaga accagaaggg acacacagtt    360
```

```
ttgacggcat ttgggaaggc cagcttcacc accttcactg tgacgaaata ctggttttac  420

cgcttgctgt ctgccctctt tggcatcccg atggcactca tctggggcat ttacttcgcc  480

attctctctt tcctgcacat ctgggcagtt gtaccatgca ttaagagctt cctgattgag  540

attcagtgca tcagccgtgt ctattccatc tacgtccaca ccgtctgtga cccactcttt  600

gaagctgttg ggaaaatatt cagcaatgtc cgcatcaact tgcagaaaga aatataaatg  660

acatttcaag gatagaagta tacctgattt tttttccttt taattttcct ggtgccaatt  720

tcaagttcca agttgctaat acagcaacaa tttatgaatt gaattatctt ggttgaaaat  780

aaaaagatca ctttctcagt tttcataagt attatgtctc ttctgagcta tttcatctat  840

ttttggcagt ctgaattttt aaaacccatt taaatttttt tccttacctt tttatttgca  900

tgtggatcaa ccatcgcttt attggctgag atatgaacat attgttgaaa ggtaatttga  960

gagaaatatg aagaactgag gaggaaaaaa aaaaaaaaga aaagaaccaa caacctcaac 1020

tgcctactcc aaaatgttgg tcattttatg ttaagggaag aattccaggg tatggccatg 1080

gagtgtacaa gtatgtgggc agattttcag caaactcttt tcccactgtt taaggagtta 1140

gtggattact gccattcact tcataatcca gtaggatcca gtgatcctta caagttagaa 1200

aacataatct tctgccttct catgatccaa ctaatgcctt actcttcttg aaattttaac 1260

ctatgatatt ttctgtgcct gaatatttgt tatgtagata acaagacctc agtgccttcc 1320

tgttttttcac attttccttt tcaaataggg tctaactcag caactcgctt taggtcagca 1380

gcctccctga agaccaaaat tagaatatcc atgacctagt tttccatgcg tgtttctgac 1440

tctgagctac agagtctggt gaagctcact tctgggcttc atctggcaac atctttatcc 1500

gtagtgggta tggttgacac tagcccaatg aaatgaatta aagtgggacc aataggggctg 1560

agctctctgt gggctgggca gtcctgggaa gccagctttc cctgcctctc atcaactgaa 1620

tgaggtcagc atgtctattc agcttcgttt attttcaaga ataatcacgc tttcctgaat 1680

ccaaactaat ccatcaccgg ggtggtttag tggctcaaca ttgtgttccc atttcagctg 1740

atcagtgggc ctccaaggag gggctgtaaa atggaggcca ttgtgtgagc ctatcagagt 1800

tgctgcaaac ctgacccctg ctcagtaaag cacttgcaac cgtctgttat gctgtgacac 1860

atggcccctc cccctgccag gagctttgga cctaatccaa gcatctcttt gcccagaaag 1920

aagatggggg aggaggcagt aataaaaaga ttgaagtatt ttgctggaat aagttcaaat 1980

tcttctgaac tcaaactgag gaatttcacc tgtaaacctg agtcgtacag aaagctgcct 2040

ggtatatcca aaagcttttt attcctcctg ctcatattgt gattctgcct ttggggactt 2100

ttcttaaacc ttcagttatg attttttttt catacactta ttggaactct gcttgatttt 2160

tgcctcttcc agtcttcctg acactttaat taccaacctg ttacctactt tgactttttg 2220

catttaaaac agacactggc atggatatag ttttactttt aaactgtgta cataactgaa 2280

aatgtgctat actgcatact tttaaatgt aaagatattt ttatctttat atgaagaaaa 2340

tcacttagga aatggctttg tgattcaatc tgtaaactgt gtattccaag acatgtctgt 2400

tctacataga tgcttagtcc ctcatgcaaa tcaattactg gtccaaaaga ttgctgaaat 2460

tttatatgct tactgatata ttttacaatt ttttatcatg catgtcctgt aaaggttaca 2520
```

agcctgcaca ataaaaatgt ttaacggtta aaaaaaaaa   2559

<210>   22
<211>   981
<212>   DNA
<213>   Homo sapiens

<400>   22

gcggagtctc caactgggag agctgcagct gccgagagga ggagaacgct gaggtcggtc   60

ggaccaacgg acgcgctgac cgctgccaac tgcagctcgc gctgcctcct gctcgcgccg   120

tgccactaag gtagtccgcc tttctatgag ccctccccaa gattagctgg gtgcggggtg   180

gtgggagccg ttctttggtg gctgaagccc ctctcctgct gctcctcctg caggtcactc   240

ccgcctccga gagcccagag ccgagatgga aacggtccag gagctgatcc ccctggccaa   300

ggagatgatg gcccagaagc gcaaggggaa gatggtgaag ctgtacgtgc tggggcagcg   360

tgctggccct cttcggcgtg gtgctcggcc tgatggagac tgtgtgcagc cccttcacgg   420

ccgccagacg tctgcgggac caggaggcag ccgtggcgga gctgcaggcc gccctggagc   480

gacaggctct ccagaagcaa gccctgcagg agaaaggcaa gcagcaggac acggtcctcg   540

gcggccgggc cctgtccaac cggcagcacg cctcctagga actgtgggag accagcggag   600

tgggagggag acgcagtaga cagagacaga ccgagaagga agggagagac agaggggcg   660

cgcgcacagg agcctgactc cgctgggaga gtgcaggagc acgtgctgtt ttttatttgg   720

acttaacttc agagaaaccg ctgacatcta gaactgacct accacaagca tccaccaaag   780

gagtttggga ttgagttttg ctgctgtgca gcactgcatt gtcatgacat ttccaacact   840

gtgtgaatta tctaaatgcg tctaccattt tgcactaggg aggaaggata aatgcttttt   900

atgttattat tattaattat tacaatgacc accattttgc attttgaaat aaaaaacttt   960

ttataccaaa aaaaaaaaa a   981

<210>   23
<211>   835
<212>   DNA
<213>   Homo sapiens

<400>   23

gcactcccaa agaactgggt actcaacact gaggcagatc tgttctttga ggctaaaaac   60

catgtgctgt accaagagtt tgctcctggg ctgctttgat gtcagtgctg ctactccacc   120

tctgcggcga atcagaagca gcaagcaact ttgactgctg tcttgggata cacagaccgt   180

attcttcatc ctaaatttat tgtgggcttc acacggcagc tggccaatga aggctgtgac   240

atcaatgcta tcatctttca cacaaagaaa aagttgtctg tgtgcgcaaa tccaaaacag   300

acttgggtga aatatattgt gcgtctcctc agtaaaaaag tcaagaacat gtaaaaactg   360

tggctttct ggaatggaat tggacatagc ccaagaacag aaagaacctt gctggggttg   420

gaggtttcac ttgcacatca tggagggttt agtgcttatc taatttgtgc ctcactggac   480

ttgtccaatt aatgaagttg attcatattg catcatagtt tgctttgttt aagcatcaca   540

ttaaagttaa actgtatttt atgttatta tagctgtagg ttttctgtgt ttagctattt   600

```
aatactaatt ttccataagc tattttggtt tagtgcaaag tataaaatta tatttggggg    660

ggaataagat tatatggact ttcttgcaag caacaagcta ttttttaaaa aaaactattt    720

aacattcttt tgtttatatt gttttgtctc ctaaattgtt gtaattgcat tataaaataa    780

gaaaaatatt aataagacaa atattgaaaa taaagaaaca aaaagttcaa aaaaa         835
```

```
<210>      24
<211>      981
<212>      DNA
<213>      Homo sapiens

<400>      24

gcgccccgga gagctcttgc gcgtcttgtt cttgcctggt gtcggtggtt agtttctgcg     60

acttgtgttg ggactgctga taggaagatg tcttcaggaa atgctaaaat tgggcaccct    120

gcccccaact tcaaagccac agctgttatg ccagatggtc agtttaaaga tatcagcctg    180

tctgactaca aaggaaaata tgttgtgttc ttcttttacc ctcttgactt cacctttgtg    240

tgccccacgg agatcattgc ttttcagtga tagggcagaa gaatttaaga aactcaactg    300

ccaagtgatt ggtgcttctg tgggattctc acttctgtca tctagcatgg ggtcaataca    360

cctaagaaac aaggaggact gggacccatg aacattcctt tggtatcaga cccgaagcgc    420

accattgctc aggattatgg ggtcttaaag gctgatgaag gcatctcgtt caggggcctt    480

tttatcattg atgataaggg tattcttcgg cagatcactg taaatgacct ccctgttggc    540

cgctctgtgg atgagacttt gagactagtt caggccttcc agttcactga caaacatggg    600

gaagtgtgcc cagctggctg gaaacctggc agtgatacca tcaagcctga tgtccaaaag    660

agcaaagaat atttctccaa gcagaagtga gcgctgggct gtttagtgc caggctgcgg    720

tgggcagcca tgagaacaaa acctcttctg tatttttttt ttccattagt aaaacacaag    780

acttcagatt cagccgaatt gtggtgtctt acaaggcagg cctttcctac aggggtgga    840

gagaccagcc tttcttcctt tggtaggaat ggcctgagtt ggcgttgtgg gcaggctact    900

ggtttgtatg atgtattagt agagcaaccc attaatcttt tgtagtttgt attaaacttg    960

aactgagaaa aaaaaaaaaa a                                             981
```

```
<210>      25
<211>      1642
<212>      DNA
<213>      Homo sapiens

<400>      25

gaaaaaggcg agcccggccc ccctggagac cccggtctca cggagttgac gtcatgacct     60

acgtgaggga gacctgcggg tgctgcgact gtgagaagcg ctgtggcgcc ctggacgtgg    120

tcttcgtcat cgacagctcc gagagcattg ggtacaccaa cttcacactg gagaagaact    180

tcgtcatcaa cgtggtcaac aggctgggtg ccatcgctaa ggaccccaag tccgagacag    240

ggacgcgtgt gggcgtggtg cagtacagcc acgagggcac ctttgaggcc atccagctgg    300

acgacgaaca tatcgactcc ctgtcgagct tcaaggaggc tgtcaagaac ctcgagtgga    360

ttgcgggcgg cacctggaca ccctcagccc tcaagtttgc ctacgaccgc ctcatcaagg    420
```

```
agagccggcg ccagaagaca cgtgtgtttg cggtggtcat cacggacggg cgccacgacc  480

ctcgggacga tgacctcaac ttgcgggcgc tgtgcgaccg cgacgtcaca gtgacggcca  540

tcggcatcgg ggacatgttc cacgagaagc acgagagtga aaacctctac tccatcgcct  600

gcgacaagcc acagcaggtg cgcaacatga cgctgttctc ccgacctggt cggttgagaa  660

gttcatcgat gacatgggag gacgtcctct gcccggaccc tcagatcgtg tgcccagacc  720

ttccctgcca aacagagctg tccgtggcac agtgcacgca gcggcccgtg gacatcgtct  780

tcctgctgga cggctccgag cggctgggtg agcagaactt ccacaaggcc cggcgcttcg  840

tggagcaggt ggcgcggcgg ctgacgctgg cccggaggga cgacgaccct ctcaacgcac  900

gcgtggcgct gctgcagttt ggtggccccg gcgagcagca ggtggccttc ccgctgagcc  960

acaacctcac ggccatccac gaggcgctgg agaccacaca atacctgaac tccttctcgc 1020

acgtgggcgc aggcgtggtg cacgccatca atgccatcgt gcgcagccag cgtggcggcc 1080

ggcggaggca cgcagagctg tccttcgtgt tcctcacgga cggcgtcacg ggcaacgaca 1140

gtctgcacga gtcggcgcac tccatgcgca agcagaacgt ggtacccacc gtgctggcct 1200

tgggcagcga cgtggacatg gacgtgctca ccacgctcag cctgggtgac cgtgccgccg 1260

tgttccacga gaaggactat gacagcctgg cgcaacccgg cttcttcgac cgcttcatcc 1320

gctggatctg ctagcgccgc cgcccgggcc ccgcagtcga gggtcgtgag cccacccgt  1380

ccatggtgct aagcgggccc gggtcccaca cggccagcac cgctgctcac tcggacgacg 1440

ccctgggcct gcacctctcc agctcctccc acggggtccc cgtagccccg gcccccgccc 1500

agccccaggt ctccccaggc cctccgcagg ctgcccggcc tccctccccc tgcagccatc 1560

ccaaggctcc tgacctacct ggcccctgag ctctggagca agccctgacc caataaaggc 1620

tttgaaccca aaaaaaaaaa aa                                         1642
```

```
<210>    26
<211>    163
<212>    DNA
<213>    Homo sapiens

<400>    26

gaccagtttg tcaagaaggg tagctgctgg agggggacac accctctgtc tgatccctta   60

tcaaagagga caaggaaact atagagctga ttttagaata ttttacaaat acatgccttc  120

cattggaatg ctaagatttt ctactgcttc tggggacggg aaa                    163


<210>    27
<211>    1746
<212>    DNA
<213>    Homo sapiens

<223>    unsure at all n locations
<400>    27

cagcgctccc actctcggcc gacacccctc atggccaacc gttacaccat ggatctgact   60

gccatctacg agagcctcct gtcgctgagc cctgacgtgc ccgtgccatc cgaccatgga  120

gggactgagt ccagcccagg ctggggctcc tcgggaccct ggagcctgag cccctccgac  180

tccagcccgt ctggggtcac ctcccgcctg cctggccgct ccaccagcct agtggagggc  240
```

```
cgcagctgtg gctgggtgcc cccacccoct ggcttcgcac cgctggctcc ccgcctgggc   300

cctgagctgt caccctcacc cacttcgccc actgcaacct ccaccacccc ctcgcgctac   360

aagactgagc tatgtcggac cttctcagag agtgggcgct gccgctacgg ggccaagtgc   420

cagtttgccc atggcctggg cgagctgcgc caggccaatc gccaccccaa atacaagacg   480

gaactctgtc acaagttcta cctccagggc cgctgcccct acggctctcg ctgccacttc   540

atccacaacc ctagcgaaga cctggcggcc ccgggccacc ctcctgtgct tcgccagagc   600

atcagcttct ccggcctgcc ctctggccgc cggacctcac caccaccacc aggcctggcc   660

ggcccttccc tgtcctccag ctccttctcg ccctccagct ccccaccacc acctggggac   720

cttccactgt naccctctgc cttctctgct gcccctggca cccccctggc tcgaagagac   780

cccaccccag tctgttgccc ctcctgccga agggccactc ctatcagcgt ctggggggccc   840

ttgggtggcc tggttcggac cccctctgta cagtccctgg ggatccgacc ctgatgaata   900

tgccagcagc ggcagcagcc tggggggctc tgactctccc gtcttcgagg cgggagtttt   960

tgcaccaccc cagcccgtgg cagccccccg gcgactcccc atcttcaatc gcatctctgt  1020

ttctgagtga caaagtgact gcccggtcag atcagctgga tctcagcggg gagccacgtc  1080

tcttgcactg tggtctctgc atggacccca gggctgtggg gacttggggg acagtaatca  1140

agtaatcccc ttttccagaa tgcattaacc cactccctg acctcacgct ggggcaggtc  1200

cccaagtgtg caagctcagt attcatgatg gtgggggatg gagtgtcttc cgaggttctt  1260

gggggaaaaa aaattgtagc atatttaagg gaggcaatga accctctccc ccacctcttc  1320

cctgcccaaa tctgtctcct agaatcttat gtgctgtgaa taataggcct tcactgcccc  1380

tccagttttt atagacctga ggttccagtg tctcctggta actggaacct ctcctgaggg  1440

ggaatcctgg tgctcaaatt accctccaaa agcaagtagc caaagccgtt gccaaacccc  1500

acccataaat caatgggccc tttatttatg acgactttat ttattctaat atgattttat  1560

agtatttata tatattgggt cgtctgcttc ccttgtattt ttcttccttt ttttgtaata  1620

ttgaaaacga cgatataatt attataagta gactataata tatttagtaa tatatattat  1680

taccttaaaa gtctattttt gtgttttggg catttttaaa taaacaatct gagtgtaaaa  1740

aaaaaa                                                            1746
```

<210>   28
<211>   1884
<212>   DNA
<213>   Homo sapiens

<400>   28

```
cgtcgtagcc ccaacctcga cggtcgccgt ggccccggtc gcgtctgcct tggagaagaa    60

gacaaagagc aagggggccct acatctgcgc tctgtgcgcc aaggagttca agaacggcta   120

caatctccgg aggcacgaag ccatccacac gggagccaag gccggccggg tcccctcggg   180

tgctatgaag atgccgacca tggtgcccct gagcctcctg agcgtgcccc agctgagcgg   240

agccggcggg ggaggggggag aggcgggtgc cggcggcggc gctgccgcag tggccgccgg   300

tggcgtggtg accacgaccg cctcggggaa gcgcatccgg aagaaccatg cctgcgagat   360
```

```
gtgtggcaag gccttccgcg acgtctacca cctgaaccga cacaagctgt cgcactcgga  420

cgagaagccc taccagtgcc cggtgtgcca gcagcgcttc aagcgcaagg accgcatgag  480

ctaccacgtg cgctcacatg acggcgctgt gcacaagccc tacaactgct cccactgtgg  540

caagagcttc tcccggccgg atcacctcaa cagtcacgtc agacaagtgc actcaacaga  600

acggcccttc aaatgtgaga aatgtgaggc agctttcgcc acgaaggatc ggctgcgggc  660

gcacacagta cgacacgagg agaaagtgcc atgtcacgtg tgtggcaaga tgctgagctc  720

ggcttatatt tcggaccaca tgaaggtgca cagccagggt cctcaccatg tctgtgagct  780

ctgcaacaaa ggtactggtg aggtttgtcc aatggcggcg gcagcggcag cggccgggca  840

gcggcagcag cggcagcagt agcagcccct cccacagctg tgggctccct ctcgggggcg  900

gaggggggtgc ctgtgagctc tcagccactt ccctcccaac cctggtgagc tccaagttgg  960

ttgcggggga gagggagaa tggagtagag tcccttggta caagctcctc tcccccctct 1020

tttcccacca actcctattt ccctaccaac caaggagcct ccagaaggaa aggaggaaga 1080

aatgtttct taggggaatt cgctaggttt taacgatttg tttctcctgc tcctcttcta 1140

tcagacctga ccccacacaa acctgtcccc tcggttgtgt tgaagtcccc tggacagtgg 1200

gcaggggtgg cagaggacac gagcagccac tgcccgtacc ccctctcctc tctgtaagcc 1260

catgccctgt cttcccaggg acttgtgagc ctcttccctc gacggtcctc ttctctcctt 1320

ccagtcctct cccctgctg tctgcagccc ctccccgggg agttggtgct ttctttcct 1380

tttttttttt tttccagggg gagggaggag aggaaggagg gggatcagag ctgtcccaaa 1440

gagggaaagc ggtgaggttt gaggaggggc agaagcaggg ccggcaaagg ttgtaccttc 1500

ataaggtggt atgggggtt ggggtcaggc cctgaacatc gtcctacttg agaatctgtc 1560

aggggaaaaa gtcaaggga gcaggaggaa gagccaggag gccagaggca gagaagagat 1620

ggagtcttag gggccagggt gagcgagggg tccagggcct agaggtgctt cctgggggcg 1680

ggggaatgca gccagtgtcc ccctcccctc ttccacccca gctccagccc tggtcttgtc 1740

ttttcatccc tcttccccac gacagaagaa gttgtggccc tggccatgtc atcgtgttcc 1800

tgtgtccccct gcatgtaccc caccctccac cccttccttt tgcgcggacc ccattacaat 1860

aaattttaaa taaaatcctg aaaa                                       1884
```

```
<210>    29
<211>    1563
<212>    DNA
<213>    Homo sapiens

<400>    29

tcacctccag gatacagaca gccccccttc agcccagccc agccaggtct cctacaccgc   60

caccatgcca ttcggtaaca cccacaacaa gttcaagctg aattacaagc ctgaggagga  120

gtaccccgac ctcagcaaac ataacaacca catggccaag gtactgaccc ttgaactcta  180

caagaagctg cgggacaagg agactccatc tggcttcact gtagacgatg tcatccagac  240

aggagtggac aacccaggtc accccttcat catgaccgtg ggctgcgtgg ctggtgatga  300

ggagtcctac gaagttttca aggaactctt tgaccccatc atctcggatc gccacggggg  360
```

```
ctacaaaccc acttgacaag cacaagactg acctcaacca ttgaaaacct caagggtgga    420

gacgacctgg accctaacta cgtgctcagc agccgcgtcc gcactggccg cagcatcaag    480

ggctacacgt tgcccccaca ctgctcccgt ggcgagcgcc gggcggtgga gaagctctct    540

gtggaagctc tcaacagcct gacgggcgag ttcaaaggga agtactaccc tctgaagagc    600

atgacggaga aggagcagca gcagctcatc gatgaccact tcctgttcga caagcccgtg    660

tccccgctgc tgctggcctc aggcatggcc cgcgactggc ccgacgcccg tggatctggc    720

acaatgacaa caagagcttc ctggtgtggg tgaacgagga ggatcacctc cgggtcatct    780

ccatggagaa gggggggcaac atgaaggagg ttttccgccg cttctgcgta gggctgcaga    840

agattgagga gatctttaag aaagctggcc accccttcat gtggaaccag cacctgggct    900

acgtgctcac ctgcccatcc aacctgggca cctgggctgc gtggaggcgt gcatgtgaag    960

cctggcgcac ctgagcaagc accccaagtt cgaggagatc ctcacccgcc tgcgtctgca   1020

gaagaggggt acaggtggcg tggacacagc ctgccgtggg ctcagtattt gacgtgtcca   1080

acgctgatcg gctgggctcg tccgaagtag aacaggtgca gctggtggtg gatggtgtga   1140

agctcatggt ggaaatggag aagaagttgg agaaaggcca gtccattgac gacatgatcc   1200

ccgcccagaa gtaggcgcct gcccacctgc caccgactgc tggaacccag ccagtgggag   1260

ggcctggccc accagagtcc tgctccctca ctcctcgccc cgcccctgt cccagagtcc    1320

cacctggggg ctctctccac ccttctcaga gttccagttt caaccagagt tccaaccaat   1380

gggctccatc ctctggattc tggccaatga aatatctccc tggcagggtc ctcttctttt   1440

cccagagctc caccccaacc aggagctcta gttaatggag agctcccagc acactcggag   1500

cttgtgcttt gtctccacgc aaagcgataa ataaaagcat tggtggcctt aaaaaaaaaa   1560

aaa                                                               1563
```

<210> 30
<211> 2263
<212> DNA
<213> Homo sapiens

<223> unsure at all n locations
<400> 30

```
ctcgagacaa gcccgtatgt gtcaacacct atggaagcta caggtgccgg accaacaaga     60

agtgcagtcg gggctacgag cccaacgagg atggcacagc ctgcgtgggg actctcggcc    120

agtcaccggg cccccgcccc accnnnnnna cncccgggac cggggctggg agcaagcagg    180

cggcggcgcc ggcggcagag gcggcagcga gcgccgcctt cccacgcccc taggcggcgg    240

ggccgagagc gggaggatgg ctccgagcgc tgaccccggc atgtccagga tgttaccgtt    300

cctgctgctg ctctggtttc tgcccatcac tgaggggtcc cagcgggctg aacccatgtt    360

cactgcagtc accaactcag ttctgcctcc tgactatgac agtaatccca cccagctcaa    420

ctatggtgtg gcagttactg atgtggacca tgatggggac tttgagatcg tcgtggcggg    480

gtacaatgga cccaacctgg ttctgaagta tgaccgggcc cagaagcggc tggtgaacat    540

cgcggtcgat gagcgcagta acccctacta cgcgctgcgg gaccggcagg ggaacgccat    600
```

```
cggggtcaca gcctgcgaca tcgacgggga cggccgggag gagatctact tcctcaacac   660

caataatgcc ttctcggggg tggccacgta caccgacaag ttgttcaagt tccgcaataa   720

ccggtgggaa gacatcctga gcgatgaggt caacgtggcc cgtggtgtgg ccagcctctt   780

tgccggacgc tctgtggcct gtgtggacag aaagggctct ggacgctact ctatctacat   840

tgccaattac gcctacggta atgtgggccc tgatgccctc attgaaatgg accctgaggc   900

cagtgacctc tcccgggggca ttctggcgct cagagatgtg gctgctgagg ctggggtcag   960

caaatataca ggggggccgag gcgtcagcgt gggccccatc ctcagcagca gtgcctcgga  1020

tatcttctgc gacaatgaga atgggcctaa cttccttttc cacaaccggg gcgatggcac  1080

ctttgtggac gctgcggcca gtgctggtgt ggacgacccc caccagcatg ggcgaggtgt  1140

cgccctggct gacttcaacc gtgatggcaa agtggacatc gtctatggca actggaatgg  1200

cccccaccgc ctctatctgc aaatgagcac ccatgggaag gtccgcttcc gggacatcgc  1260

ctcacccaag ttctccatgc cctccctgt ccgcacggtc atcaccgccg actttgacaa  1320

tgaccaggag ctggagatct tcttcaacaa cattgcctac cgcagctcct cagccaaccg  1380

cctcttccgc gtcatccgta gagagcacgg agacccctc atcgaggagc tcaatcccgg  1440

cgacgccttg gagcctgagg gccggggcac aggggggtgtg gtgaccgact tcgacggaga  1500

cgggatgctg gacctcatct tgtcccatgg agagtccatg gctcagccgc tgtccgtctt  1560

ccggggcaat cagggcttca acaacaactg gctgcgagtg gtgccaacgc acccggtttg  1620

gggcctttgc caggggagct aaggtcgtgc tctacaccaa gaagagtggg gcccacctga  1680

ggatcatcga cgggggctca ggctacctgt gtgagatgga gcccgtggca cactttggcc  1740

tggggaagga tgaagccagc agtgtggagg tgacgtggcc agatggcaag atggtgagcc  1800

ggaacgtggc cagcggggag atgaactcag tgctggagat cctctacccc cgggatgagg  1860

acacacttca ggacccagcc ccactggagt gtggccaagg attctcccag caggaaaatg  1920

gccattgcca tggacaccaa tgaatgcatc cagttcccat tcgtgtgccc tcgagacaag  1980

cccgtatgtg tcaacaccta tggaagctac aggtgccgga ccaacaagaa gtgcagtcgg  2040

ggctacgagc ccaacgagga tggcacagcc tgcgtggctc aagtggcctt tttaggtggg  2100

tattcttcag ccgcctctag aatctctgag cctctctctc gggcctcata tctttctcta  2160

ggccttggac tttgccttca gttatatgca ctttaaatcc catcaataaa ggaaaaaaca  2220

aaacaaaact aacagccttt gtggaaaact aaaaaaaaaa aaa              2263
```

<210>   31
<211>   2310
<212>   DNA
<213>   Homo sapiens

<400>   31

```
cggcattcct cctgtagctg cacgaagcac cttggaagtt gttttcaacc atatccagcc    60

tttgccgaat acatcctatc tgccacacat ccagcgtgag gtccctccag ctacaaggtg   120

ggcaccatgg cggagaagtt tgactgccac tactgcaggg atcccttgca ggggaagaag   180

tatgtgcaaa aggatggcca ccactgctgc ctgaaatgct ttgacaagtt ctgtgccaac   240
```

```
acctgtgtgg aatgccgcaa gcccatcggt gcggactcca aggaggtgca ctataagaac  300

cgcttctggc atgacacctg cttccgctgt gccaagtgcc ttcacccctt gggccaatga  360

gacctttgtg gccaaggaca acaagatcct gtgcaacaag tgcaccactc gggaggactc  420

ccccaagtgc aagggtgct tcaaggccat tgtggcagga gatcaaaacg tggagtacaa  480

ggggaccgtc tggcacaaag actgcttcac ctgtagtaac tgcaagcaag tcatcgggac  540

tggaagcttc ttccctaaag gggaggactt ctactgcgtg acttgccatg agaccaagtt  600

tgccaagcat tgcgtgaagt gcaacaaggc catcacatct ggaggaatca cttaccagga  660

tcagccctgg catgccgatt gctttgtgtg tgttacctgc tctaagaagc tggctgggca  720

gcgtttcacc gctgtggagg accagtatta ctgcgtggat tgctacaaga actttgtggc  780

caagaagtgt gctggatgca agaaccccat cactgggttt ggtaaaggct ccagtgtggt  840

ggcctatgaa ggacaatcct ggcacgacta ctgcttccac tgcaaaaaat gctccgtgaa  900

tctggccaac aagcgctttg ttttccacca ggagcaagtg tattgtcccg actgtgccaa  960

aaagctgtaa actgacaggg gctcctgtcc tgtaaaatgg catttgaatc tcgttctttg  1020

tgtccttact ttctgcccta taccatcaat aggggaagag tggtccttcc cttctttaaa  1080

gttctccttc cgtcttttct cccattttac agtattactc aaataagggc acacagtgat  1140

catattagca tttagcaaaa agcaaccctg cagcaaagtg aatttctgtc cggctgcaat  1200

ttaaaaatga aaacttaggt agattgactc ttctgcatgt ttctcataga gcagaaaagt  1260

gctaatcatt tagccactta gtgatgtaag caagaagcat aggagataaa accccactg  1320

agatgcctct catgcctcag ctgggaccca cccgtgtaga cacacgacat gcaagagttg  1380

cagcggctgc tccaactcac tgctcaccct cttctgtgag caggaaaaga accctactga  1440

catgcatggt ttaacttcct catcagaact ctgcccttcc ttctgttctt ttgtgctttc  1500

aaataactaa cacgaacttc cagaaaatta acatttgaac ttagctgtaa ttctaaactg  1560

acctttcccc gtactaacgt ttggtttccc cgtgtggcat gttttctgag cgttcctact  1620

ttaaagcatg gaacatgcag gtgatttggg aagtgtagaa agacctgaga aaacgagcct  1680

gtttcagagg aacatcgtca caacgaatac ttctggaagc ttaacaaaac taaccctgct  1740

gtccttttta ttgtttttaa ttaatatttt tgttttaatt gatagcaaaa tagtttatgg  1800

gtttggaaac ttgcatgaaa atattttagc cccctcagat gttcctgcag tgctgaaatt  1860

catcctacag aagtaaccgc aaaactctag aggggagtt gagcaggcgc cagggctgtc  1920

atcaacatgg atatgacatt tcacaacagt gactagttga atcccttgta acgtagtagt  1980

tgtctgctct ttgtccatgt gttaatgagg actgcaaagt cccttctgtt gtgattccta  2040

ggactttttcc tcaagaggaa atctggattt ccacctaccg cttacctgaa atgcaggatc  2100

acctacttac tgtattctac attattatat gacatagtat aatgagacaa tatcaaaagt  2160

aaacatgtaa tgacaataca tactaacatt cttgtaggag tggttagaga agctgatgcc  2220

tcatttctac attctgtcat tagctattat catctaacgt ttcagtgtat ccttacagaa  2280

ataaagcagc atatgaataa aaaaaaaaa                                    2310
```

<210>   32

<211>   3342
<212>   DNA
<213>   Homo sapiens

<400>   32

```
gaagaagtta agagcttcat ggatcgaaag aagggattta cagaagttaa gtcgcagaat     60

ggagaattca tgacccacaa acttaaacat actgagaata ctttcagccg ccctggaggg    120

agggccagcg tggacaccaa ggaggctgag ggcgcccccc agtggaagc cggcaaaagg    180

ctggaggagc ttcgtcgtcg tcgcggggag accgagagcg aagagttcga gaagctcaaa    240

cagaagcagc aggaggcggc tttggagctg gaggaactca agaaaaagag ggaggagaga    300

aggaaggtcc tggaggagga agagcagagg aggaagcagg aggaagccga tcgaaaactc    360

agagaggagg aagagaagag gaggctaaag gaagagattg aaaggcgaag agcagaagct    420

gctgagaaac gccagaagat gccagaagat ggcttgtcag atgacaagaa accattcaag    480

tgtttcactc ctaaaggttc atctctcaag atagaagagc gagcagaatt tttgaataag    540

tctgtgcaga aaagcagtgg tgtcaaatcg acccatcaag cagcaatagt ctccaagatt    600

gacagcagac tggagcagta taccagtgca attgagggaa caaaaagcgc aaaacctaca    660

aagccggcag cctcggatct tcctgttcct gctgaaggtg tacgcaacat caagagtatg    720

tgggagaaag ggaatgtgtt ttcatccccc actgcagcag gcacaccaaa taaggaaact    780

gcctggcttg aaggtagggg tttctagccg catcaatgaa tggctaacta aaaccccaga    840

tggaaacaag tcacctgctc ccaaaccttc tgacttgaga ccaggagacg tatccagcaa    900

gcggaacctc tgggaaaagc aatctgtgga taaggtcact ttcccccact aaggtttgag    960

acagttccag aaagaaccca agctcaagac gcaggacgag ctcagttgta gagggctaat   1020

tcgctctgtt ttgtatttat gttgatttac taaattgggt tcattatctt ttatttttca   1080

atatcccagt aaacccatgt atattatcac tatatttaat aatcacagtc tagagatgtt   1140

catggtaaaa gtactgcctt tgcacaggag cctgtttcta aagaaaccca tgctgtgaaa   1200

tagagacttt tctactgatc atcataactc tgtatctgag cagtgatacc aaccacatct   1260

gaagtcaaca gaagatccaa gtttaaaatt gcctgcggaa tgtgtgcagt atctagaaaa   1320

atgaaccgta gtttttgttt ttttaaatac agaagtcatg ttgtttctgc actttataat   1380

aaagcatgga agaaattatc ttagtaggca attgtaacac tttttgaaag taacccattt   1440

cagatttgaa atactgcaat aatggttgtc tttaaaaaaa aaaagaaat gtactgttaa   1500

ggtattactt tttttcatgc tgatgattca tatctaaatt acattattat gttagctgac   1560

agtggtactg attttttagg ttggttgttt tgtggatttc tttagtagtg atagtagcct   1620

gaaccacatt ttagataact caattatgta tgtatgtgca tacacatata caaacacact   1680

aatggtagaa tgcttttta tgtgctagac tattatattt agtagtatgt cattgtaact   1740

agccaatatc acagcttttg aaaaattaaa aaatcacact atattaatat ttcatatttg   1800

ccaacagaaa catggcagat aggtatcaat atgtttcaa tgcctgatga cctataagaa   1860

gaaagtattg aaaagaagag agattagaac tgttagaagg agttgaaatt ttctaaaaga   1920

catagtattt agtttataat taaatgcatt cttgaagtcc agtgtgaatt ttattaatgc   1980
```

```
tatcatctcg accaagctca aagcctactt attagaaaca atgaagttca caataggtca 2040

taaggtctct tcctttttcta aaattgaaag acaagaaatt tagtgccaat attgtacaga 2100

cagaaattcc atgtatgagt ctcaacaaag actacctttg gctaaatgtc tagaagcaga 2160

gaagtaaagt gagcaaaatc cagtgttgag gagtcatgac agtactttga tctttatata 2220

ctctgaagca tttcttcaaa cttttctact tttatttgtc attgatacct gtagtaagtt 2280

gacaatgtgg tgaaatttca aaattatatg taacttctac tagttttact ttctccccca 2340

agtctttttt aactcatgat ttttacacac acaatccaga acttattata tagcctctaa 2400

gtctttattc ttcacagtag ataatgaaag agtcctccag tgtcttggca aaatgttcta 2460

gtatagctgg atacatacag tggagttcta taaactcata cctcagtgga cttaaccaaa 2520

attgtgttag tctcaattcc taccacactg aggggagcct ccccaaataa ctattttctt 2580

atctgcagta ttcctccaga agagctaacc aggggcaggg ctggcatgag aagtgacatc 2640

tgcgttacaa agtctatctt cctcataagt ctgtaaagag caattgaatc ttctagcttt 2700

agcaaaccta agccaaagga aggaaagcca cgaagaatgc agaagtcaaa ccctcatgac 2760

aaagtaggca caagtctaca ataagctaaa tcagaattta caaatacaag tgtcccaggt 2820

agcattgact cccgtcattg gagtgaaatg gatcaaagtt tgaattaagg cctatggtaa 2880

ggtaacattg ctttgttgta cttttgaaca agagctcctc ctgatcacta ttacatattt 2940

ttctagaaaa tctaaagttc agaagagaat gtatcactgc tgactttat tccaatattt 3000

ggatggagta agttttaggg tagaattttg ttcagtttgg atttaatctt ttgaaaagta 3060

aattccttgt ttactggttt gactataatt ctctgttatc tttacgaggt aaaactgcaa 3120

gctgactagc atgttctgtg aatctgccat tcctaaaaat tttataaaca cttgatactt 3180

ttcactgata atggatcgct ccaataaaca tatattgtga aaatgcatcc acaataaatg 3240

gaattccttc ctgcaaaatg tcttttttctc acttattttt atgtacaata ttgatagtga 3300

gaggtatgtc tattataata aagattatgg cacagtaaaa aa             3342
```

```
<210>      33
<211>      954
<212>      DNA
<213>      Homo sapiens

<400>      33

cagcctcaag attcacagca tctcagacgc agcctaggcc gcaccaggat gtcggacacc    60

gaggagcagg aatatgagga ggagcagccg gaagaggagg ctgcggttga ggaggaggaa   120

gcccccgaag agccggagcc ggtggcagag ccagaagagg aacgccccaa accaagccgc   180

cccgtggtgc ctcctttgat cccgccaaag atcccagaag gggagcgcgt tgacttcgat   240

gacatccacc ggcaagcgca tggagaaaga cctgctggag ctgcagacac tcatcgatgt   300

acatttcgag cagcggaaga aggaggaaga ggagctggtt gccttgaagg agcgcattga   360

gcggcgccgg tcagagagag cccgagcaac agcgcttcag aactgagaag gaacgcgaac   420

gtcaggctaa gctggcggag gagaagatga ggaaggaaga ggaagaggcc aagaagcggg   480

cagaggatga tgccaagaaa aagaaggtgc tgtccaacat ggggggcccat tttggcggct   540
```

```
acctggtcaa ggcagaacag aagcgtggta agcggcagac ggggcgggag atgaaggtgc    600

gcatcctctc cgagcgtaag aagcctctgg acattgacta catggggggag gaacagctcc    660

gggagaaagc ccaggagctg tcggactgga tccaccagct ggagtctgag aagttcgacc    720

tgatggcgaa gctgaaacag cagaaatatg agatcaacgt gctgtacaac cgcatcagcc    780

acgcccagaa gttccggaag ggggcaggga agggccgcgt tggaggccgc tggaagtgag    840

gatgccgccc cggacagtgg cacctgggaa gcctgggagt gtttgtccca tcggtagctt    900

gaaataaacg ctcccctcag acacccgctg ggttctctga tgttattatg gttg          954
```

```
<210>      34
<211>      3183
<212>      DNA
<213>      Homo sapiens

<400>      34
```

```
gcgccgcacc tacaccagcc aacccagatc ccgaggtccg acagcgcccg gcccagatcc     60

ccacgcctgc caggagcaag ccgagagcca gccggccggc gcactccgac tccgagcagt    120

ctctgtcctt cgacccgagc cccgcgccct ttccgggacc cctgccccgc gggcagcgct    180

gccaacctgc cggccatgga gaccccgtcc cagcggcgcg ccacccgcag cggggcgcag    240

gccagctcca ctccgctgtc gcccacccgc atcacccggc tgcaggagaa ggaggacctg    300

caggagctca atgatcgctt ggcggtctac atcgaccgtg tgcgctcgct ggaaacggag    360

aacgcagggc tgcgccttcg catcaccgag tctgaagagg tggtcagccg cgaggtgtcc    420

ggcatcaagg ccgcctacga ggccgagctc ggggatgccc gcaagaccct tgactcagta    480

gccaaggagc gcgcccgcct gcagctggag ctgagcaaag tgcgtgagga gtttaaggag    540

ctgaaagcgc ggcaatacca agaaggaggg tgacctgata gctgctcagg ctcggctgaa    600

ggacctggag gctctgctga actccaagga ggccgcactg agcactgctc tcagtgagaa    660

gcgcacgctg gagggcgagc tgcatgatct gcggggccag gtggccaagc ttgaggcagc    720

cctaggtgag gccaagaagc aacttcagga tgagatgctg cggcgggtgg atgctgagaa    780

caggctgcag accatgaagg aggaactgga cttccagaag aacatctaca gtgaggagct    840

gcgtgagacc aagcgccgtc atgagacccg actggtggag attgacaatg ggaagcagcg    900

tgagtttgag agccggctgg cggatgcgct gcaggaactg cgggcccagc atgaggacca    960

ggtggagcag tataagaagg agctggagaa gacttattct gccaagctgg acaatgccag   1020

gcagtctgct gagaggaaca gcaacctggt ggggggctgcc cacgaggagc tgcagcagtc   1080

gcgcatccgc atcgacagcc tctctgccca gctcagccag ctccagaagc agctggcagc   1140

caaggaggcg aagtttcgag acctggagga ctcactggcc cgtgagcggg acaccagccg   1200

gcggctgcct ggcggaaaag gagcgggaga tggccgagat gcgggcaagg atgcagcagc   1260

agctggacga gtaccaggag cttctggaca tcaagctggc cctggacatg gagatccacg   1320

cctaccgcaa gctcttggag ggcgaggagg agaggctacg cctgtccccc agccctacct   1380

cgcagcgcag ccgtggccgt gcttcctctc actcatccca gacacagggt gggggcagcg   1440

tcaccaaaaa gcgcaaactg gagtccactg agagccgcag cagcttctca cagcacgcac   1500
```

```
gcactagcgg gcgcgtgggc cgtggaggag gtggatgagg agggcaagtt tgtccggctg 1560

cgcaacaagt ccaatgagga ccagtccatg ggcaattggc agatcaagcg ccagaatgga 1620

gatgatccct tgctgactta ccggttccca ccaaagttca ccctgaaggc tgggcaggtg 1680

gtgacgatct gggctgcagg agctggggcc acccacagcc cccctaccga cctggtgtgg 1740

aaggcacaga acacctgggg ctgcgggaac agcctgcgta cggctctcat caactccact 1800

ggggaagaag tggccatgcg caagctggtg cgctcagtga ctgtggttga ggacgacgag 1860

gatgaggatg gagatgacct gctccatcac caccacggct cccactgcag cagctcgggg 1920

ggaccccgct gagtacaacc tgcgctcgcg caccgtgctg tgcgggacct gcgggcagcc 1980

tgccgacaag gcatctgcca gcggctcagg agcccaggtg ggcggaccca tctcctctgg 2040

ctcttctgcc tccagtgtca cggtcactcg cagctaccgc agtgtggggg gcagtggggg 2100

tggcagcttc ggggacaatc tggtcacccg ctcctacctc ctgggcaact ccagcccccg 2160

aacccagagc ccccagaact gcagcatcat gtaatctggg acctgccagg caggggtggg 2220

ggtggaggct tcctgcgtcc tcctcacctc atgcccaccc cctgccctgc acgtcatggg 2280

aggggggcttg aagccaaaga aaaataaccc tttggttttt ttcttctgta tttttttttc 2340

taagagaagt tattttctac agtggtttta tactgaagga aaaacacaag caaaaaaaaa 2400

aaaaaagcat ctatctcatc tatctcaatc ctaatttctc ctcccttcct tttccctgct 2460

tccaggaaac tccacatctg ccttaaaacc aaagagggct tcctctagaa gccaagggaa 2520

aggggtgctt ttatagaggc tagcttctgc ttttctgccc tgggctgctg cccccacccc 2580

ggggggaccct gtgacatggt gcctgagagg cagggcatag aggcttctcc gccagcctcc 2640

tctgggacgg caggcttcac tgccagggcc agcctccgag agggagagag agagagagag 2700

gacagcttga gccgggcccc tgggtttggc ctgctgtgat tccactacac ctggctgagg 2760

ttcctctgcc tgccccgccc ccagtcccca cccctgcccc cagccccggg gtgagtccat 2820

tctcccaggt accaagctgc gcttgctttt ctgtatttta tttagacaag agatgggaat 2880

gaggtgggag gtggaagaag ggagaagaaa ggtgagtttg agctgccttc cctagcttta 2940

gaccctgggt gggctctgtg cagtcactgg aggttgaagc caagtggggt gctgggagga 3000

gggagaggga ggtcactgga aaggggagag cctgctggca cccaccgtgg aggaggaagg 3060

caagagggggg tggaggggtg tggcagtggt tttggcaaac gctaaagagc ccttgcctcc 3120

ccatttccca tctgcacccc ttctctcctc cccaaatcaa tacactagtt gtttctaaaa 3180

aaa                                                                3183
```

```
<210>    35
<211>    207
<212>    DNA
<213>    Homo sapiens

<400>    35

ccaggttgtt ggcgttttcc acagtaactg tgtatgttcc agcatctgtg tcatctgcat    60

cgttgatggt cagagcccgc atcaagccaa tgacgcctgg cacaattcgg ccaggtttct   120

ccaccacaat cttgccatcc ttcctccaga ccacgtcacg ctctttgttt aactcgcagc   180
```

tcaagtacaa tggctgtcct ttgacca   207


```
<210>      36
<211>      253
<212>      DNA
<213>      Homo sapiens

<400>      36
```

atttattaca tttttttcatg cactgtcaag tttatcctcc gtcccctaac ttctctacag   60

gataccccTt tctggtttgg ttcatgacaa tctgcaggga aagagctgcc ttcaaactcc   120

tttgcttatc tcttccaaca ccttggactc ttgaccgatt ttaccatctc aggtttcaga   180

gccaggagag agccctgcct catcctgagc tgttcatccc catgggtatt ttctgccttt   240

ctattccctc ttc   253


```
<210>      37
<211>      687
<212>      DNA
<213>      Homo sapiens

<400>      37
```

tgagccgccg ccgaggattc agcagcctcc cccttgagcc ccctcgcttc ccgacgttcc   60

gttcccccct gcccgccttc tcccgccacc gccgccgccg ccttccgcag gccggtttcc   120

accgaggaaa aggaatcgta tcgtatgtcc gctatccaga acctccactc tttcgacccc   180

tttgctgatg caagtaaggg tgatgacctg cttcctgctg gcactgagga ttatatccat   240

ataagaattc aacagagaaa cggcaggaag acccttacta ctgtccaagg gatcgctgat   300

gattacgata aaagaaact agtgaaggcg tttaagaaaa agtttgcctg caatggtact   360

gtaattgagc atccggaata tggagaagta attcagctac agggtgacca acgcaagaac   420

atatgccagt tcctcgtaga gattggactg gctaaggacg atcagctgaa ggttcatggg   480

tttttaagtgc ttgtggctca ctgaagctta agtgaggatt ccttgcaat gagtagaatt   540

tcccttctct cccttgtcac aggtttaaaa acctcacagc ttgtataatg taaccatttg   600

gggtccgctt ttaacttgga ctagtgtaac tccttcatgc aataaactga aaagagccat   660

gctgtctagt cttgaagtcc ctcattt   687


```
<210>      38
<211>      609
<212>      DNA
<213>      Homo sapiens

<400>      38
```

ggtgcgggggg cccactgctc tgggctcccc cagggaggga gcagagtctc gccaagtgct   60

cctggaggga tgggagtgga gcctggcatt ctgaacacat ctctgagggg tgggattaat   120

aagacggtct ctgtgcctcc tgctcccaga tcctgactgc tgtcatggcg tgccctctgg   180

agaaggccct ggatgtgatg gtgtccacct tccacaagta ctcgggcaaa gagggtgaca   240

agttcaagct caacaagtca gaactaaagg agctgctgac ccgggagctg cccagcttct   300

tggggaaaag gacagatgaa gctgctttcc agaagctgat gagcaacttg gacagcaaca   360

gggacaacga ggtggacttc caagagtact gtgtcttcct gtcctgcatc gccatgatgt 420

gtaacgaatt ctttgaaggc ttcccagata agcagcccag gaagaaatga aaactcctct 480

gatgtggttg ggggtctgc cagctggggc cctccctgtc gccagtgggc actttttttt 540

ttccaccctg gctccttcag acacgtgctt gatgctgagc aagttcaata aagattcttg 600

gaagtttta   609

<210>   39
<211>   2539
<212>   DNA
<213>   Homo sapiens

<400>   39

cccottacat ggttctgctg gagagcaagc attttaccag ggatttaatg gagaagctga   60

aagggagaac cagccgaatt gctggtcttg cagtgtcctt gaccaagccc agtcctgcct 120

caggacatct ctcctagtgt acagtgccca aatgatgggt ttggtgttta ctccaattcc 180

tatgggccag agtttgctca ctgcagagaa atacagtgga attcgctggg caatggtttg 240

gcttatgaag actttagttt ccccatcttt cttcttgaag atgaaaatga aaccaaagtc 300

atcaagcagt gctatcaaga tcacaacctg agtcagaatg gctcagcacc aaccttccca 360

ctatgtgcca tgcagctctt ttcacacatg catgctgtca tcagcactgc cacctgcatg 420

cggcgcagtc catccaaagc accttcagca tcaacccaga aatcgtctgt gacccctgt 480

ctgattacaa tgtgtggagc atgctaaagc ctataaatac aactgggaca ttaaagcctg 540

acgacagggt tgtggttgct gccacccggc tggatagtcg ttccttttt tggaatgtgg 600

ccccaggggc tgaaagcgca gtggcttcct ttgtcaccca gctggctgct gctgaagctt 660

tgcaaaaggc acctgatgtg accaccctgc cccgcaatgt catgtttgtc ttctttcaag 720

gggaaacttt tgactacatt ggcagctcga ggatggtcta cgatatggag aagggcaagt 780

ttcccgtgca gttagagaat gttgactcat ttgtggagct gggacaggtg gccttaagaa 840

cttcattaga gctttggatg cacacagatc ctgtttctca gaaaaatgag tctgtacgga 900

accaggtgga ggatctcctg gccacattgg agaagagtgg tgctggtgtc cctgctgtca 960

tcctcaggag gccaaatcag tcccagcctc tcccaccatc ttccctgcag cgatttcttc 1020

gagctcgaaa catctctggc gttgttctgg ctgaccactc tggtgccttc cataacaaat 1080

attaccagag tatttacgac actgctgaga acattaatgt gagctatccc gaatggctga 1140

gccctgaaga ggacctgaac tttgtaacag acactgccaa ggccctggca gatgtggcca 1200

cggtgctggg acgtgctctg tatgagcttg caggaggaac caacttcagc gacacagttc 1260

aggctgatcc ccaaacggtt acccgcctgc tctatggggt tcctgattaa agccaacaac 1320

tcatggttcc agtctatcct cagggcagga cctaaggtcc tacttgggtg acgggcctct 1380

tcaacattac atcgctgtct ccagccccac caacaccact tatgttgtac agtatgcctt 1440

ggcaaatttg actggcacag tggtcaacct cacccgagag cagtgccagg atccaagtaa 1500

agtcccaagt gaaaacaagg atctgtatga gtactcatgg tccagggcc ctttgcattc 1560

taatgagacg gaccgactcc cccggtgtgt gcgttctact gcacgattag ccagggcctt 1620

```
gtgctcctgc cttttgaactg agtcagtgga gctctactga atactctaca tggactgaga 1680

gccgctggaa agatatccgt gcccggatat ttctcatcgc cagcaaagag cttgagttga 1740

tcaccctgac agtgggcttc ggcatcctca tcttctccct catcgtcacc tactgcatca 1800

atgccaaagc tgatgtcctt ttcattgctc cccgggagcc aggagctgtg tcatactgag 1860

gaggacccca gcttttcttg ccagctcagc agttcacttc ctagagcatc tgtcccactg 1920

ggacacaacc actaatttgt cactggaacc tccctgggcc tgtctcagat tgggattaac 1980

ataaaagagt ggaactatcc aaaagagaca gggagaaata aataaattgc ctcccttcct 2040

ccgctcccct ttcccatcac cccttcccca tttcctcttc cttctctact catgccagat 2100

tttgggatta caaatagaag cttcttgctc ctgtttaact ccctagttac ccaccctaat 2160

ttgcccttca ggacccttct acttttтcct tcctgccctg tacctctctc tgctcctcac 2220

ccccaccct gtacccagcc accttcctga ctgggaagga cataaaaggt ttaatgtcag 2280

ggtcaaacta cattgagccc ctgaggacag gggcatctct gggctgagcc tactgtctcc 2340

ttcccactgt cctttctcca ggccctcaga tggcacatta gggtgggcgt gctgcgggtg 2400

ggtatcccac ctccagccca cagtgctcag ttgtactttt tattaagctg taatatctat 2460

ttttgttttt gtctttttcc tttattcttt ttgtaaatat atatataatg agtttcatta 2520

aaatagatta tcccacacg                                              2539
```

```
<210>    40
<211>    3146
<212>    DNA
<213>    Homo sapiens

<400>    40
```

```
ggagaaggag ctacctcccc acctggggga actgaccgtg gctgaggaga cctccagctc    60

tctgcgcctg tcctggacgg tagcccaggg ccccttтgac tccttcgtgg tccagtacag   120

ggacacggac gggcagccca gggcagtgcc tgtggccgca gaccagcgca cagtcaccgt   180

agaggacctg gagcctggca agaaatacaa gtttctgctc tacgggctcc ttggggggaaa   240

gcgcctgggc ccggtctctg ccctgggaat gacagcccca gaagaggaca caccagcccc   300

agagttagcc ccagaggccc ctgagcctcc tgaagagccc cgcctaggag tgctgaccgt   360

gaccgacaca accccagact ccatgcgcct ctcgtggagc gtggcccagg gcccctttga   420

ttccttcgtg gtccagtatg aggacacgaa cgggcagccc caggccttgc tcgtggacgg   480

cgaccagagc aagatcctca tctcaggcct ggagcccagc accccctaca ggttcctcct   540

ctatggcctc catgaaggga agcgcctggg gcccctctca gctgagggca ccacagggct   600

ggctcctgct ggtcagacct cagaggagtc aaggccccgc ctgtcccagc tgtctgtgac   660

tgacgtgacc accagttcac tgaggctcaa ctgggaggcc ccaccggggg ccttcgactc   720

cttcctgctc cgctttgggg ttccatcacc aagcactctg gagccgcatc cgcgtccact   780

gctgcagcgc gagctgatgg tgccggggac gcggcactcg gccgtgctcc gggacctgcg   840

ttccgggact ctgtacagcc tgacactgta tgggctgcga ggaccccaca aggccgacag   900

catccaggga accgcccgca ccctcagccc agttctggag agccccgtg acctccaatt   960
```

```
cagtgaaatc agggagacct cagccaaggt caactggatg cccccaccat cccgggcgga 1020

cagcttcaaa gtctcctacc agctggcgga cggaggggag cctcagagtg tgcaggtgga 1080

tggccaggcc cggacccaga aactccaggg gctgatccca ggcgctcgct atgaggtgac 1140

cgtggtctcg gtccgaggct ttgaggagag tgagcctctc acaggcttcc tcaccacggt 1200

tcctgacggt cccacacagt tgcgtgcact gaacttgacc gagggattcg ccgtgctgca 1260

ctggaagccc ccccagaatc ctgtggacac ctatgacgtc caggtcacag cccctggggc 1320

cccgcctctg caggcggaga ccccaggcag cgcggtggac taccccctgc atgaccttgt 1380

cctccacacc aactacaccg ccacagtgcg tggcctgcgg ggccccaacc tcacttcccc 1440

agccagcatc accttcacca cagggctaga ggcccctcgg gacttggagg ccaaggaagt 1500

gacccccccgc accgccctgc tcacttggac tgagcccca gtccggcccg caggctacct 1560

gctcagcttc cacacccctg gtggacagaa ccaggagatc ctgctcccag gagggatcac 1620

atctcaccag ctccttggcc tctttccctc cacctcctac aatggcacgg ctccaggcca 1680

tgtggggcca gagcctcctg ccgcccgtgt ccacctcttt caccacgggt gggctgcgga 1740

tccccttccc cagggactgc ggggaggaga tgcagaacgg agccggtgcc tccaggacca 1800

gcaccatctt cctcaacggc aaccgcgagc ggcccctgaa cgtgttttgc gacatggaga 1860

ctgatggggg cggctggctg gtgttccagc gccgcatgga tggacagaca gacttctgga 1920

gggactggga ggactatgcc catggttttg ggaacatctc tggagagttc tggctgggca 1980

atgaggccct gcacagcctg acacaggcag gtgactactc catgcgcgtg gacctgcggg 2040

ctggggacga ggctgtgttc gcccagtacg actccttcca cgtagactcg gctgcggagt 2100

actaccgcct ccacttggag ggctaccacg gcaccgcagg ggactccatg agctaccaca 2160

gcggcagtgt cttctctgcc cgtgatcggg accccaacag cttgctcatc tcctgcgctg 2220

tctcctaccg aggggcctgg tggtacagga actgcccact acgccaacct caacgggctc 2280

tacgggagca cagtggacca tcagggagtg agctggtacc actggaaggg cttcgagttc 2340

tcggtgccct tcacggaaat gaagctgaga ccaagaaact ttcgctcccc agcggggga 2400

ggctgagctg ctgcccacct ctctcgcacc ccagtatgac tgccgagcac tgaggggtcg 2460

ccccgagaga agagccaggg tccttcacca cccagccgct ggaggaagcc ttctctgcca 2520

gcgatctcgc agcactgtgt ttacagggg gaggggaggg gttcgtacgg gagcaataaa 2580

ggagaaactg aggtacccgg ctggcatcgg tcctgcccca tcactggttc tggcctgggc 2640

tgtgggcccc catcccccgg ggctgcagcc gcacttggaa aggctgcatc ttgaggatga 2700

cactgcagtg gggcaggggc tgcagggagg gcagggcgtc cccggagggc agcagcgtga 2760

aggcctgcag cagtcgggtc agcaccacga agagctccag gcgcgccagc ggctcgccca 2820

ggcacacgcg ggcaccgcag ccgaaggcca gagctctgga gttcttgcct ggctccagga 2880

agcgatcagg ccagaactca tgtggcctct cccagaccgt ctcatccagg tgggcgcctt 2940

ggaggttcgg aatgatgact gtgccctcag ggatgtcgta gccagagatg ctgctgggcc 3000

gtgtggtgcg gtggggcaag gctaagggca caacgggccg caggcgcagc acctcggcga 3060

tggtggcatt gagcaagggc agccgtgcac ggtccttgta ggggacccgg gagctggagg 3120
```

```
caccagggcc cagttcgtgg tctagc                                    3146
```

```
<210>      41
<211>      2898
<212>      DNA
<213>      Homo sapiens

<223>      unsure at all n locations
<400>      41
```

```
acagagggac gtggtcactc tctgaaaagt tcaacttgag agacaaaatg cagtggacct    60

ccctcctgct gctggcaggg ctcttctccc tctcccaggc ccagtatgaa gatgaccctc   120

attggtggtt ccactacctc cgcagccagc agtccaccta ctacgatccc tatgaccctt   180

acccgtatga gacctacgag ccttacccct atggggtgga tgaagggcca gcctacacct   240

acggctctcc atcccctcca gatccccgcg actgccccca ggaatgcgac tgcccaccca   300

acttccccac ggccatgtac tgtgacaatc gcaacctcaa gtacctgccc ttcgttccct   360

cccgcatgaa gtatgtgtac ttccagaaca accagatcac ctccatccag gaaggcgtct   420

ttgacaatgc cacagggctg ctctggattg ctctccacgg caaccagatc accagtgata   480

aggtgggcag gaaggtcttc tccaagctga ggcacctgga gaggctgtac ctggaccaca   540

acaacctgac ccggatgccc ggtcccctgc ctcgatccct gagagagctc catctcgacc   600

acaaccagat ctcacgggtc cccaacaatg ctctggaggg gctggagaac ctcacggcct   660

tgtacctcca acacaatgag atccaggaag tgggcagttc catgaggggc ctccggtcac   720

tgatcttgct ggacctgagt tataaccacc ttcggaaggt gcctgatggg ctgccctcag   780

ctcttgagca gctgtacatg gagcacaaca atgtctacac cgtccccgat agctacttcc   840

gggggggcgcc caagctgctg tatgtgcggc tgtcccacaa cagtctaacc aacaatggcc   900

tggcctccaa caccttcaat tccagcagcc tccttgagct agacctctcc tacaaccagc   960

tgcagaagat ccccccagtc aacaccaacc tggagaacct ctacctccaa ggcaatagga  1020

tcaatgagtt ctccatcagc agcttctgca ccgtggtgga cgtcgtgaac ttctccaagc  1080

tgcaggtgct gcgcctggac gggaacgaga tcaagcgcag gnccatgcct gccgacgcgc  1140

ccctctgcct gcgccttgcc agcctcatcg agatctgagc agccctggca ccgggtactg  1200

ggcggagagc ccccgtggca tttggcttga tggtttggtt tggcttttgc tggaaggtcc  1260

aggatggacc atgtgacaga agtccacggg caccctctgt agtcttcttt cctgtaggtg  1320

gggttagggg gggcgatcag ggacaggcag ccttctgctg aggacatagg cagaagctca  1380

ctcttttcca gggacagaag tggtggtaga tggaaggatc cctggatgtt ccaaccccat  1440

aaatctcacg gctcttaagt tcttcccaat gatctgaggt catggaactt caaaagtggc  1500

atgggcaata gtatataacc atacttttct aacaatccct ggctgtctgt gagcagcact  1560

tgacagctct ccctctgtgc tgggctggtc gtgcagttac tctgggctcc catttgttgc  1620

ttctcaaaat atacctcttg cccagctgcc tcttctgaaa tccacttcac ccactccact  1680

ttcctccaca gatgcctctt ctgtgcctta agcagagtca ggagacccca aggcatgtga  1740

gcatctgccc agcaacctgt ggagacaacc cacactgtgt ctgagggtga aaggacacca  1800

ggagtcactt ctatacctcc ctaacctcac ccctggaaag ccaccagatt ggaggtcacc  1860
```

```
agcatgatga taatattcat gacctgatgt gggaggagac agccaacctc aggcttagat 1920

caatgtatag ggctatattt tggcagctgg gtagctcttt gaaggtggat aagacttcag 1980

aagaggaaag gccagacttt gcttaccatc agcatctgca atgggccaaa cacacctcaa 2040

attggctgag ttgagaaagc agccccagta gttccattct tgcccagcac tttctgcatt 2100

ccaaacagca tcctacctgg ggtttttatc cacaaaggta gcggccacat ggtttttaaa 2160

gtatgagaaa cacagtttgt cctctccttt tatccaagca ggaagattct atatcctgat 2220

ggtagagaca gactccaggg cagccctggg acttgctagc ccaaagaagg aggatgtggt 2280

taatctgttt cacctggttt gtcctaaggc catagttaaa aagtaccagc tctggctggg 2340

gtccgtgaag cccaggccag gcagccaaat cttggcctgt gctgggcata caaccctctg 2400

ctttcacatc tctgagctat atcctcatta gtgaaggtgg cttttgcttt atagtttggc 2460

tggggagcac ttaattcttc ccatttcaaa aggtaatgtt gcctggggct taacccacct 2520

gccctttggg caaggttggg acaaagccat ctgggcagtc aggggcaagg actgttggag 2580

gagagttagc ccaagtatag gctctgccca gatgccatca catccctgat actgtgtatg 2640

ctttgaagca ccttccctga gaagggaaga ggggatcttt ggactaggtt cttggctcca 2700

gacctggaat ccacaaaagc caaaccagct catttcaaca aaggagctcc gatgtgaggg 2760

gcaaggctgc cccctgcccc agggctcttc agaaagcatc tgcatgtgaa caccatcatg 2820

cctttataaa ggatccttat tacaggaaaa gcatgagtgg tggctaacct gaccaataaa 2880

gttattttat gattgcaa                                              2898
```

<210>   42
<211>   854
<212>   DNA
<213>   Homo sapiens

<223>   unsure at all n locations
<400>   42

```
ttcggcacag cgnggggata caactctgga gtcctctgag agagccacca aggaggagca    60

ggggagcgac ggccggggca gaagttgaga ccacccagca gaggagctag gccagtccat   120

ctgcatttgt cacccaagaa ctcttaccat gaagaccctc ctactgttgg cagtgatcat   180

gatctttggc ctactgcagg cccatgggaa tttggtgaat ttccacagaa tgatcaagtt   240

gacgacagga aaggaagccg cactcagtta tggcttctac ggctgccact gtggcgtggg   300

tggcagagga tcccccaagg atgcaacgga tcgctgctgt gtcactcatg actgttgcta   360

caaacgtctg gagaaacgtg ggatgtgggc accaaatttc tgagctacaa gtttaggcaa   420

ctcggggagc agaatcacct gtgcaaaaca ggactcctgc agaagtcaac tgtgtgagtg   480

tgataaggct gctgccacct gttttgctag aaacaagacg acctacaata aaaagtacca   540

gtactattcc aataaacact gcagagggag cacccctcgt tgctgagtcc cctcttccct   600

ggaaaccttc cacccagtgc tgaatttccc tctctcatac cctccctccc taccctaacc   660

aagttccttg gccatgcaga aagcatccct cacccatcct agaggccagg caggagccct   720

tctatacccca cccagaatga gacatccagc agatttccag ccttctactg ctctcctcca   780
```

```
cctcaactcc gtgcttaacc aaagaagctg tactccgggg ggtctcttct gaataaagca  840

attagcaaat catg                                                    854


<210>      43
<211>      471
<212>      DNA
<213>      Homo sapiens

<400>      43

caataccatg aagaggaggc tcaggcagct cttaccacat gatacaagag ccggctggtg   60

gaagagtggg gaccagaaag agaatttgct gaagaggaga aggaaaaaaa aaacaccaaa  120

aaaaaaaata aaaaaatcca cacacacaaa aaaacctgcg cgtgaggggg gaggaaaagc  180

agggcctttt aaaaaggcaa tcacaacaac ttttgctgcc agggatgccc ttgctttggc  240

tgagaggatt tctgttggca agttgctgga ttatagtgag gagttccccc accccaggat  300

ccgaggggca cagcgcggcc cccgactgtc cgtcctgtgc gctggccgcc ctcccaaagg  360

atgtacccaa ctctcagcca gagatggtgg aggccgtcaa gaagcacatt ttaaacatgc  420

tgcacttgaa gaagagaccc gatgtcaccc agccggtacc caaggcggcg c           471


<210>      44
<211>      1411
<212>      DNA
<213>      Homo sapiens

<400>      44

gccactgctc tgagaatttg tgagcagccc ctaacaggct gttacttcac tacaactgac   60

gatatgatca tcttaattta cttatttctc ttgctatggg aagacactca aggatgggga  120

ttcaaggatg gaatttttca taactccata tggcttgaac gagcagccgg tgtgtaccac  180

agagaagcac ggtctggcaa atacaagctc acctacggca gaagctaagg cggtgtgtga  240

atttgaaggc ggccatctcg caacttacaa gcagctagag gcagccagaa aaattggatt  300

tcatgtctgt gctgctggat ggatggctaa gggcagagtt ggataccccca ttgtgaagcc  360

agggcccaac tgtggatttg gaaaaactgg cattattgat tatggaatcc gtctcaatag  420

gagtgaaaga tgggatgcct attgctacaa cccacacgca aaggagtgtg gtggcgtctt  480

tacagatcca aagcaaattt ttaaatctcc aggcttccca aatgagtacg aagataacca  540

aatctgctac tggcacatta gactcaagta tggtcagcgt attcacctga gttttttaga  600

ttttgacctt gaagatgacc caggttgctt ggctgattat gttgaaatat atgacagtta  660

cgatgatgtc catggctttg tgggaagata ctgtggagat gagcttccag atgacatcat  720

cagtacagga aatgtcatga ccttgaagtt tctaagtgat gcttcagtga cagctggagg  780

tttccaaatc aaatatgttg caatggatcc tgtatccaaa tccagtcaag gaaaaaatac  840

aagtactact tctactggaa ataaaaactt tttagctgga agatttagcc acttataaaa  900

aaaaaaaaag gatgatcaaa acacacagtg tttatgttgg aatctttttgg aactcctttg  960

atctcactgt tattattaac atttatttat tattttttcta aatgtgaaag caatacataa 1020

tttagggaaa attggaaaat ataggaaact ttaaacgaga aaatgaaacc tctcataatc 1080
```

ccactgcata gaaataacaa gcgttaacat tttcatattt ttttctttca gtcatttttc 1140

tatttgtggt atatgtatat atgtacctat atgtatttgc atttgaaatt ttggaatcct 1200

gctctatgta cagttttgta ttatactttt taaatcttga actttataaa cattttctga 1260

aatcattgat tattctacaa aaacatgatt ttaaacagct gtaaaatatt ctatgatatg 1320

aatgttttat gcattattta agcctgtctc tattgttgga atttcaggtc attttcataa 1380

atattgttgc aataaatatc cttgaacaca c   1411

<210>   45
<211>   1877
<212>   DNA
<213>   Homo sapiens

<400>   45

gttcttgcct agtgagcaga tccagggggt tgtgatctcc gtgattaacc tggagcctag   60

aactggcttc ttgtccaacc ctagggcctg gggccgcttt gacagtgtca tcacaggccc   120

caacggggcc tgtgtggcct gccttctgtg atgaccagtc ccctgatgcc tactctgcct   180

atgtcttggc aagcctggct ggggaggaac tgcaagcagt gggagtcttc tcctaaattc   240

aacccaaatg caattggcgt ccctcagccc tatctcaaca agctcaacta ccgtcggacg   300

gaccatgagg atccacgggt taaaaagaca gctttccaga ttagcatggc ccaagccaag   360

gcccaactca gctgaggaga gcaatgggcc catctatgcc tttgagaacc tccgggcatg   420

tgaagaggca ccacccagtg cagcccactt ccggttctac cagattgagg gggatcgata   480

tgactacaac acagtcccct tcaacgaaga tgaccctatg agctggactg aagactatct   540

ggcatggtgg ccaaagccga tggaattcag ggcctgctat atcaaggtga agattgtggg   600

gccactggaa gtgaatgtgc gatcccgcaa catggggggc actcatcggc ggacagtggg   660

gaagctgtat ggaatccgag atgtgaggag cactcgggac agggaccagc ccaatgtctc   720

agctgcctgt ctggagttca gtgcagtgg gatgctctat gatcaggacc gtgtggaccg   780

caccctggtg aaggtcatcc cccagggcag ctgccgtcga gccagtgtga accccatgct   840

gcatgagtac ctggtcaacc acttgccact tgcagtcaac aacgacacca gtgagtacac   900

catgctggca ccccttggacc cactgggcca caactatggc atctacactg tcactgacca   960

ggaccctcgc acggccaagg agatcgcggt tcggccggtg ctttgatggc acatccgatg 1020

gctcctccag aatcatgaag agcaatgtgg gagtagccct caccttcaac tgtgtagaga 1080

ggcaagtagg ccgccagagt gccttccagt acctccaaag caccccagcc cagtcccctg 1140

ctgcaggcac tgtccaagga agagtgccct cgaggaggca gcagcgagcg agcaggggtg 1200

gccagcgcca gagtggagtg gtggcctctc tgagatttcc tagagttgct caacagcccc 1260

tgatcaacta agttttgtgg tacttcaccc tcttctgccc tcatttcatg tgacagccat 1320

tgtgagactg atgcacaaac tgtcacttgg ttaatttaag cacttctgtt ttcgtgaatt 1380
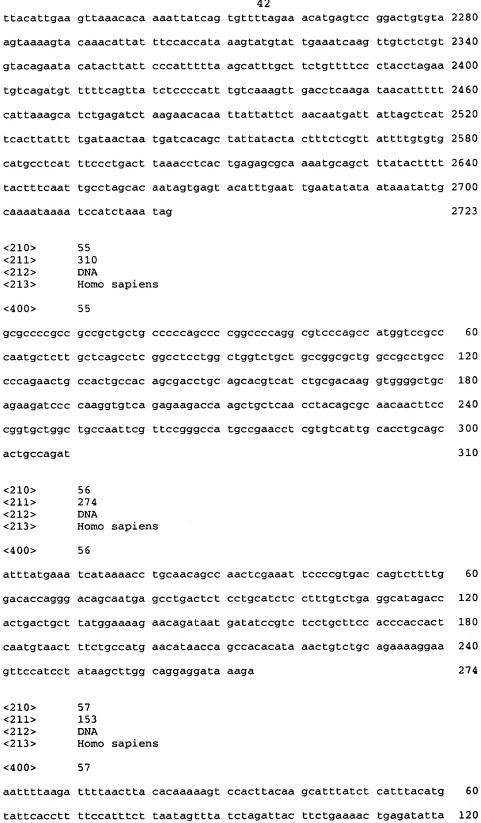
tgcttgtttg tttcttcatg cctttactta ctttgtccca tgctactgat tggcacgtgg 1440

cccccacaat ggcacaataa agcccctttg tgaaactgtt ctttaaatga aacacaagaa 1500

attggccact ggtaaaactc tgcagcttca actgtacttc atttaatgcc attaatgcaa 1560

```
atatacttcc tcttcttttt gcatggtttt gcccacctct gcaatagtga taatctgatg 1620

ctgaagatca aataaccaat ataaagcata tttcttggcc ttgctccaca ggacataggc 1680

aaggccttga tcatagttca tacatataaa tggtggtgaa ataaagaaat aaaacacaat 1740

actttтactt gaaatgtaaa taacttattt atttctttgc taaatttgga attctagtgc 1800

acattcaaag ttaagctatt aaatataggg tgatcatagt tcctctacca agtctggaaa 1860

agaacatctc ctggtat                                            1877
```

```
<210>      46
<211>      167
<212>      DNA
<213>      Homo sapiens

<400>      46

atcaaaaaca tcactccctc tccctcccta acagtgaaaa gagagaaggg agactctatt    60

taagattccc aaacctaatg atcatctgaa tcccgggcta agaatgcaga ctttтcagac   120

tgaccccaga aattctggcc cagccaatct agaggcaagc ctggcca                 167
```

```
<210>      47
<211>      1689
<212>      DNA
<213>      Homo sapiens

<400>      47

cccgcctccg ccacctttct tgggtggctc tccgcctcgt cctccctccg agggccgttg    60

gtacattcct agtgactcca agcgcttaaa aggggcccgg gaggatgaac cccacagatc   120

tgaacctgat ttgtgtgtgc accgcgtctc cagcgatccc ggatccactg cgctgccagg   180

gcgcctgggg gtgggtctct tgctgtctct gcgacgacat ccttacgttt cggcactcta   240

atgctgggtt tgtgcgtgtg tgtctgctta gcggtctagc gggctgttag gctccctcgc   300

ccccagctcc ttggctcgct cagctcctcc accgcagccc agcagtgaga cgcgcgcgca   360

gccagctccc cacgagatgg aacagaccga agtgctgaag ccacggaccc tggctgatct   420

gatccgcatc ctgcaccagc tctttgccgg cgatgaggtc aatgtagagg aggtgcaggc   480

catcatggaa gcctacgaga gcgaccccac cgagtgggca atgtacgcca agttcgacca   540

gtacaggtat acccgaaatc ttgtggatca aggaaatgga aaatttaatc tgatgattct   600

ctgttggggt gaaggacatg gcagcagtat tcatgatcat accaactccc actgctttct   660

gaagatgcta cagggaaatc taaaggagac attatttgcc tggcctgaca aaaaatccaa   720

tgagatggtc aagaagtctg aaagagtctt gagggaaaac cagtgtgcct acatcaatga   780

ttccattggc ttacatcgag tagagaacat cagccatacg gaacctgctg tgagccttca   840

cttgtacagt ccaccttttg atacatgcca tgcctttgat caaagaacag gacataaaaa   900

caaagtcaca atgacattcc atagtaaatt tggaatcaga actccaaatg caacttcggg   960

ctcgctggag aacaactaag gggcaccaaa ccctctgagg ttttacttta aggttcgctg  1020

tatgtttgcc ttggacaaaa aggctaccta ccacgtgcta tccagtaata tacttaaata  1080

agccaatact tagatctact gtaaggcaga tgctaattat aaggcattaa gtaagcaaat  1140
```

```
agtgccctca gctactgcag aagaaaagtc ccactgagga aaagaaagtc ttgtgatttt 1200

taaaggcaag ttttcaagtg ctctcatagt tctatcctct aattccatta aatccatact 1260

aggagcgtca gtgagggttt tcatagcttt tggaaatact ttggtctctg aactgtaatt 1320

agcaagaagt aaaaacagaa acgtcaaacg tcaaatgttt gctttgttac ctggaggact 1380

aaatgtagat gtctttagta tactttgtat gttcttaata ttggaagata attttgtgaa 1440

tctgtagatt ttattttttc agtcttacct tacaaatttc ttttctatga ataatagagg 1500

aacttacggc actctgccat ttgttaatga aaggaagtgc agaggattta gaaaagtaca 1560

tgatccccag accacaacaa accaaaacat aaactcatgt ctgtgtccca tggtcatagt 1620

caaagatttt gtactgctaa aattaccaaa taatttaaat aaagtggatt tgaacacaaa 1680

aaaaaaaaa                                                           1689
```

```
<210>     48
<211>     184
<212>     DNA
<213>     Homo sapiens

<400>     48
```

```
agaaaacaat gaagaatcga atgaagatga agactctgag gctgagaata ccacactttc   60

tgctacaaca ctgggctatg gagaggacgc cacgcctggc acagggtata cagggttagc  120

tgcaatccag cttcccaaga aggctgggga tataacaaac aaagctacaa aagagaagga  180

aagt                                                                184
```

```
<210>     49
<211>     259
<212>     DNA
<213>     Homo sapiens

<400>     49
```

```
cctggccccg tgggtcctcc tggcctgacg ggtcctgcag gtgaacctgg acgagaggga   60

agccccggtg ctgatggccc ccctggcaga gatggcgctg ctggagtcaa gggtgatcgt  120

ggtgagactg gtgctgtggg agctcctgga gccctgggc ccctggctc ccctggcccc  180

gctggtccaa ctggcaagca aggagacaga ggagaagctg gtgcacaagg ccccatggga  240

ccctcaggac cagctggag                                                259
```

```
<210>     50
<211>     245
<212>     DNA
<213>     Homo sapiens

<400>     50
```

```
gagagaaggg ccacccaggt ctcattggac tgattgggcc cccgggtgag cagggagaga   60

agggagatcg gggacttcct gggcctcagg gctcccctgg gcagaagggt gagatgggta  120

tcccaggagc atccggcccc attggtcctg gaggtccccc cggcctcccc ggacctgctg  180

gccccaaagg agccaaagga gccacaggcc caggcggacc caagggagag aagggtgtgc  240

agggc                                                               245
```

```
<210>      51
<211>      515
<212>      DNA
<213>      Homo sapiens

<400>      51

cttgcagaga aagagtcttt tgtgcagcac cctttaaagg gtgactcgtc ccacttgtgt      60

tctctctcct ggtgcagagt tgcaagcaag tttatcagag tatcgccatg aagttcgtcc     120

cctgccttct gctggtgacc ttgtcctgcc tggggacttt gggtcaggcc ccgaggcaaa     180

agcaaggaag cactggggag gaattccatt ccagactgg agggagagat tcctgcacta      240

tgcgtcccag cagcttgggg caaggtgctg gagaagtct gcttcgcgtc gactgccgca      300

acacagacca gacctactgg tgtgagtaca gggggcagcc cagcatgtgc caggctttcg      360

ctgctgaccc caaatcttac tggaatcaag ccctgcagga gctgaggcgc cttcaccatg     420

cgtgccaggg ggccccggtg cttaggccat ccgtgtgcag ggaggctgga ccccaggccc     480

atatgcagca ggtgacttcc agcctcaagg gcagc                                515


<210>      52
<211>      281
<212>      DNA
<213>      Homo sapiens

<400>      52

gcccggggcc ctggacgatg tggagaacct cgccaaattc cacgtggaca ggaaccagct      60

gtccagctac ccctcagctg ccctgagcaa gctacgggtg gtggaggagc tgaagctgtc     120

ccacaacccc ctgaaaagca tcccggacaa tgccttccag tcctttggca gatacctgga     180

gaccctctgg ctggacaaca ccaacctgga gaagttctca gatggtgcct tcctgggtgt     240

aaccacgctg aaacacgtcc atttggagaa caaccgcttg a                         281


<210>      53
<211>      252
<212>      DNA
<213>      Homo sapiens

<400>      53

gggacagatc ccagggtgcc cagggagtct ccaagtgcct cactcctccc gccgcaaaca      60

tgacagagaa ctccgacaaa gttcccattg ccctggtggg acctgatgac gtggaattct     120

gcagcccccc ggcgtacgct acgctgacgg tgaagccctc cagccccgcg cggctgctca     180

aggtgggagc cgtggtcctc atttcgggag ctgtgctgct gctctttggg gccatcgggg     240

ccttctactt aa                                                         252


<210>      54
<211>      2723
<212>      DNA
<213>      Homo sapiens

<400>      54

gacatagctt ttctcattca ccctcccact tggggctaat gcacagacat gaacatctat      60
```

```
tgaggaaaac cacaaaaaac ttcaaaacag ctacaacggg aaaaagagag ttttgtccca  120

cagtcagcag gccactagtt tattaacttc cagtcacctt gatttttgct aaaatgaaga  180

ctctgcagtc tacacttctc ctgttactgc ttgtgcctct gataaagccc aggcaccacc  240

aacccagcag gactcacgca ttatctatga ttatggaaca gataattttg aagaatccat  300

atttagccaa gattatgagg ataaatacct ggatggaaaa aatattaagg aaaaagaaac  360

tgtgataata cccaatgaga aaagtcttca attacaaaaa gatgaggcaa taacaccatt  420

acctcccaag aaagaaaatg atgaaatgcc cacgtgtctg ctgtgtgttt gtttaagtgg  480

ctctgtatac tgtgaagaag ttgacattga tgctgtacca cccttaccaa aggaatcagc  540

ctatctttac gcacgattca acaaaattaa aaagctgact gccaaagatt ttgcagacat  600

acctaactta agaagactcg attttacagg aaatttgata gaagatatag aagatggtac  660

tttttcaaaa ctttctctgt tagaagaact ttcacttgct gaaaatcaac tactaaaact  720

tccagttctt cctcccaagc tcactttatt taatgcaaaa tacaacaaaa tcaagagtag  780

gggaatcaaa gcaaatgcat tcaaaaaact gaataacctc accttcctct acttggacca  840

taatgccctg gaatccgtgc ctcttaattt accagaaagt ctacgtgtaa ttcatcttca  900

gttcaacaac atagcttcaa ttacagatga cacattctgc aaggctaatg acaccagtta  960

catccgggac cgcattgaag agatacgcct ggagggcaat ccaatcgtcc tgggaaagca 1020

tccaaacagt tttatttgct taaaaagatt accgataggg tcatactttt aacctctatt 1080

ggtacaacat ataaatgaaa gtacacctac actaatagtc tgtctcaaca atgagtaaag 1140

gaacttaagt attggtttaa tattaacctt gtatctcatt ttgaaggaat ttaatatttt 1200

aagcaaggat gttcaaaatc ttacatataa taagtaaaaa gtaagactga atgtctacgt 1260

tcgaaacaaa gtaatatgaa aatatttaaa cagcattaca aaatcctagt ttatactaga 1320

ctaccattta aaaatcatgt ttttatataa atgcccaaat ttgagatgca ttattcctat 1380

tactaatgat gtaagtacga ggataaatcc aagaaacttt caactctttg cctttcctgg 1440

cctttactgg atcccaaaag catttaaggt acatgttcca aaaactttga aaagctaaat 1500

gtttcccatg atcgctcatt cttctttat gattcatacg ttattcctta taaagtaaga 1560

actttgtttt cctcctatca aggcagctat tttattaaat ttttcactta gtctgagaaa 1620

tagcagatag tctcatattt aggaaaactt tccaaataaa ataaatgtta ttctctgata 1680

aagagctaat acagaaatgt tcaagttatt ttactttctg gtaatgtctt cagtaaaata 1740

ttttctttat ctaaatatta acattctaag tctaccaaaa aaagtttaa actcaagcag 1800

gccaaaacca atatgcttat aagaaataat gaaaagttca tccatttctg ataaagttct 1860

ctatggcaaa gtctttcaaa tacgagataa ctgcaaaata ttttcctttt atactacaga 1920

aatgagaatc tcatcaataa attagttcaa gcataagatg aaaacagaat attctgtggt 1980

gccagtgcac actaccttcc cacccataca catccatgtt cactgtaaca aactgaatat 2040

tcacaataaa gcttctgagt aacactttct gattactcat gataaactga catggctaac 2100

tgcaagaatt aaatcttcta tctgagagta ataatttatg atgactcagt ggtgccagag 2160

taaagtttct aaaataacat tcctctcact tgtaccccac taaaagtatt agtctacaca 2220
```

```
ttacattgaa gttaaacaca aaattatcag tgttttagaa acatgagtcc ggactgtgta 2280

agtaaaagta caaacattat ttccaccata aagtatgtat tgaaatcaag ttgtctctgt 2340

gtacagaata catacttatt cccatttta agcatttgct tctgttttcc ctacctagaa 2400

tgtcagatgt ttttcagtta tctccccatt tgtcaaagtt gacctcaaga taacattttt 2460

cattaaagca tctgagatct aagaacacaa ttattattct aacaatgatt attagctcat 2520

tcacttattt tgataactaa tgatcacagc tattatacta ctttctcgtt attttgtgtg 2580

catgcctcat ttccctgact taaacctcac tgagagcgca aaatgcagct ttatacttt 2640

tactttcaat tgcctagcac aatagtgagt acatttgaat tgaatatata ataaatattg 2700

caaaataaaa tccatctaaa tag                                      2723
```

```
<210>      55
<211>      310
<212>      DNA
<213>      Homo sapiens

<400>      55

gcgccccgcc gccgctgctg cccccagccc cggccccagg cgtcccagcc atggtccgcc    60

caatgctctt gctcagcctc ggcctcctgg ctggtctgct gccggcgctg gccgcctgcc   120

cccagaactg ccactgccac agcgacctgc agcacgtcat ctgcgacaag gtggggctgc   180

agaagatccc caaggtgtca gagaagacca agctgctcaa cctacagcgc aacaacttcc   240

cggtgctggc tgccaattcg ttccgggcca tgccgaacct cgtgtcattg cacctgcagc   300

actgccagat                                                          310
```

```
<210>      56
<211>      274
<212>      DNA
<213>      Homo sapiens

<400>      56

atttatgaaa tcataaaacc tgcaacagcc aactcgaaat tccccgtgac cagtcttttg    60

gacaccaggg acagcaatga gcctgactct cctgcatctc ctttgtctga ggcatagacc   120

actgactgct tatggaaaag aacagataat gatatccgtc tcctgcttcc acccaccact   180

caatgtaact ttctgccatg aacataacca gccacacata aactgtctgc agaaaaggaa   240

gttccatcct ataagcttgg caggaggata aaga                               274
```

```
<210>      57
<211>      153
<212>      DNA
<213>      Homo sapiens

<400>      57

aattttaaga ttttaactta cacaaaaagt ccacttacaa gcatttatct catttacatg    60

tattcacctt ttccatttct taatagttta tctagattac ttctgaaaac tgagatatta   120

cacaaaacta atcattattt aaagttattt ccg                               153
```

```
<210>      58
```

```
<211>      225
<212>      DNA
<213>      Homo sapiens

<400>      58

tgatggtaag ttgtttcagg cataaaattt gaaataaatt atgaggctcc atgatatgct   60

atattggttt taccttcaga agaatattta gtttcactca ggttttttcaa agctacgctg  120

tcccccaaaa aacgaaacaa aacaaaaaaa caaccttttt aagagttgat ggctactcat  180

ttgatctgcc tcctctgctg aatcaattag gaattttttt ttttt             225


<210>      59
<211>      448
<212>      DNA
<213>      Homo sapiens

<400>      59

ggaagcgtcc aaagagggac ggctgtcagc cctggcttga ctgagaaccc accagctcat   60

cccagacacc tcatagcaac ctatttatac aaaggggggaa agaaacacct gagcagaatg  120

gaatcattat ttttttccca aggagaaaac cggggtaaag ggagggaagc aattcaattt  180

gaagtccctg tgaatgggct ttcagaaggc aattaaagaa atccactcag agaggacttg  240

gggtgaaact tgggtcctgt ggttttctga ttgtaagtgg aagcaggtct tgcacacgct  300

gttggcaaat gtcaggacca ggttaagtga ctggcagaaa aacttccagg tggaacaagc  360

aacccaggtt ctgctgcaag cttggaagga gcctggagcg ggagaaagct aacttgaaca  420

tgacctgttg catttggcaa gttctagc                                     448


<210>      60
<211>      59
<212>      DNA
<213>      Homo sapiens

<400>      60

atgacattgg ttgcctcagc cctgaaaagc tatgtctctg cattcttagt tttctttgt    59


<210>      61
<211>      321
<212>      DNA
<213>      Homo sapiens

<223>      unsure at all n locations
<400>      61

attaattgcc agtagttgta aggaggagtc agcatctagt gttactccct nnnnnnnnnn   60

nnnnnnnnnn nnnntccagg tactggctaa tggagctact gccacctcta aacccctcca  120

gccactaggc tgtgtcccac agtcagtgtc acccagtgaa caggcattac ccccacatct  180

ggaaccagcc tggccccaag ggctacggca taactcagta ccaggtagag ttggccccac  240

agagtacctt tcccccagata tgcaacgcca gcgaaagacc aagcgcaaaa ccaaagagca  300

gctggctatc cttaaatcct t                                            321


<210>      62
<211>      252
```

<212> DNA
<213> Homo sapiens

<400> 62

tttccctaat atttaaatta ttccttataa accagtagaa aagctttaac aacataacag   60

aaaaatggga aaagactatg aatagacggg acccagaaaa gcacatacaa ataagtggct   120

attttactac acctttactt tggaaaactt caaacctgta ctaaaataga ataggggcagt   180

gaacctccct gcctgcaccc atcactcagc gtcaacattg atcaactcat gggcaatctt   240

gttttatcta tt   252

<210> 63
<211> 218
<212> DNA
<213> Homo sapiens

<400> 63

cacaagttaa aacttcccat gtataaaaac acttacattt taaaacatca ctgccaactg   60

tgtgctcatg tgggagtaca gatgtgtata tacagacatg tacattttta aagacttggt   120

tgtctctgca gtgaagacaa tatgttttat tttttattcc atatacttct ctgtattttc   180

tatatttgct tcaataagct ggtgtaactt ttaatttt   218

<210> 64
<211> 235
<212> DNA
<213> Homo sapiens

<400> 64

gatcaaatcg gaaaggtaaa gatgaaatgc ttttcctgtt tcttgatttt tatctaccag   60

caataatatg aggcacactc gtaaagtaaa ggtttgcatt atatttacaa ttaaactcta   120

gaaaagcata attctgagct aaatattctg cctaaagaat ctctttcaca taatccttcc   180

tggtcacttg ctccttgcac tcacaatttg tttcttaatt cctatgcttt ttatc   235

<210> 65
<211> 239
<212> DNA
<213> Homo sapiens

<400> 65

tgccgctttg ttgagcccctt aaaataccac ctcctcatgt gtaaattgac acaatcacta   60

atctggtaat ttaaacaatt gagatagcaa aagtgtttaa cagactagga taattttttt   120

ttcatatttg ccaaaatttt tgtaaaccct gtcttgtcaa ataagtgtat aatattgtat   180

tattaattta tttttacttt ctataccatt tcaaaacaca ttacactaag ggggaacca   239

<210> 66
<211> 243
<212> DNA
<213> Homo sapiens

<400> 66

ggaaactcca ggctcctggt ttttccctgg gcggggaaag agaagactga aacatctgtg   60

tgacattcag attttttcaga ggtctgccca agggtctggt ttttatttttg cttgaatata   120

agttctgaca ggaaagggca ccaggttgcg gggtcattga aaacaaagtt gacagtttag   180

attagcaggc actcaccatg gtccctcccc ctccctcagc atgaaaacca gcaggagaaa   240

ttc   243

<210>   67
<211>   250
<212>   DNA
<213>   Homo sapiens

<400>   67

gtctgtgtac catcttacct ggaatagaga ttgtgttaaa ttaacagatc atctgactga   60

gaggttttttt tcccccaaaa cagaagcaaa taaacattat tttgttcctt tggtataact   120

ttcattgaac agttatatag tgctttggaa gtatcaagtc ctgtgctaaa taaatgctgg   180

agatacaaaa gcccctgacc tcagaatgtc atagtcttgg ggtaagaaaa aattcattct   240

gtgcccgagg   250

<210>   68
<211>   213
<212>   DNA
<213>   Homo sapiens

<400>   68

caggtgtgaa ccactgcacc tggcccaaaa tctcttgatt gatacagtcc tctttatttt   60

tcaagatcaa gttatgatac ctttaccaac agtcatacat tcttttggaa ctttgcacaa   120

tagtcatatg ttcttttaga actttacact tctattcttt attgccctgt attataattg   180

cttgtatgcc tgactcctct acatgactgt atg   213

<210>   69
<211>   198
<212>   DNA
<213>   Homo sapiens

<400>   69

cataaaccta ctttatcatc ctctcctaaa gggaaaagag aagatttagc tagaataatt   60

attaacagaa gatgtggaga tacagaagaa actagaaaat atctcacaat caatacatct   120

ttcaagcagt caatcatttg tcactcatat tgcttttttta aacccagctt tacatggaag   180

gaataaatgg aactccag   198

<210>   70
<211>   393
<212>   DNA
<213>   Homo sapiens

<400>   70

aaaaaaagga aaaaaaaaat tgccttaagt catatagatt gtaccagcag ctctcacagt   60

gtggactttg gacttctagg agtccccagg aacctttttag gggatgccta cgaggaggtc   120

caaactgttt tcataagaac gctaaggtgc tatgtgcctt tttaactcat tctctcacga   180

gtgttcagtg gagtttttcca gaggctctgt gacatggtga catcactctg ataattagta   240

gaatgtgtgt gtgtgtactt ttgtttttcta gaatattgta aattgataga tttagggtat   300

aaatatatgt gttttcagag attaactcag tttgctgcca gtgcttctac tgtgctctta   360

ctggctattt tcatttatac ctgctgctga gtc   393

<210>   71
<211>   216
<212>   DNA
<213>   Homo sapiens

<400>   71

ctctacttgt atgaccctag gaatagattg gaatactgca gaggaccaaa gctgaggcat   60

gctaaacagc tgcttggagg tggaagcaag ttcagtcacc tactcagctt cctctctcca   120

ccacccagtt cctccctcag tatcacatta ttttttttctt ctgctttttca ttaacctaac   180

tcatctcatc agtacaacca ttttcttatt ctctaa   216

<210>   72
<211>   166
<212>   DNA
<213>   Homo sapiens

<400>   72

caaatattta acagaactaa tggaactatt ttagtatgct ttcccctggg ctggagtgta   60

ggctaagact ttatttaaat acaggatgga tggtgttttg actgaagatg cctccaactt   120

ttgctcttct gtttttttatt tgatgtgctc aagcttctaa ttccct   166

<210>   73
<211>   240
<212>   DNA
<213>   Homo sapiens

<400>   73

tgataggcag ctaaaactgt tatgcccact gtgctcaatt tgaagcagaa ttcagtgaaa   60

aattattttt ccacattgaa acactttgca gacacaaata tctatgaaaa gatgctttgt   120

cagccactgt gccttttttt ctgtgaagac tcaacggatg tgtgtgtttg tatgtttgtt   180

aacagttaca tatgtttgta tgagtgtata tatatatctg tgtgtgtgta tctctaacgt   240

<210>   74
<211>   291
<212>   DNA
<213>   Homo sapiens

<400>   74

tggacccccca gctgaggagt cctgctcaag acacggtcac tggatctgag aaacttccca   60

ggggaccgca ttccagagtc agtgactctg tgaagcaccc acatctacct cttgccacgt   120

tcccacgggc ttgggggaaa gatggtgggg accaaggcct gggtgttctc cttcctggtc   180

ctggaagtca catctgtgtt ggggagacag acgatgctca cccagtcagt aagaagagtc   240

cagcctggga agaagaaccc cagcatcttt gccaagcctg ccgacaccct g   291

<210> 75
<211> 283
<212> DNA
<213> Homo sapiens

<400> 75

```
ctccgccagc ctccgggaga ggagccgcac ccggccggcc cggccccagc cccatggacc   60

tccgagcagg ggactgcgtg ggggatgtta gcgtgcctgt gcacggtgct ctggcacctc  120

cctgcagtgc cagctctcaa tcgcacaggg gacccagggc ctggcccctc catccagaaa  180

acctatgacc tcacccgcta cctggagcac caactccgca gcttggctgg gacctatctg  240

aactacctgg gccccccttt caacgagcca gacttcaacc ctc                    283
```

<210> 76
<211> 139
<212> DNA
<213> Homo sapiens

<400> 76

```
ccttcgtgaa gtcgccaaac ctctctgagc cccagtcatt gctagtaaga cctgcctttg   60

agttggtatg atgttcaagt tagataacaa aatgtttata cccattagaa cagagaataa  120

atagaactac atttcttgc                                               139
```

<210> 77
<211> 669
<212> DNA
<213> Homo sapiens

<400> 77

```
ctggctggag cagcgagtct gtcgatccca ggccagagac aaggcagaca aaggttcatt   60

tgtaaagaag ctccttccag cacctcctct cttctccttt tgcccaaact cacccagtga  120

gtgtgagcat ttaagaagca tcctctgcca agaccaaaag gaaagaagaa aaagggccaa  180

aagccaaaat gaaactgatg gtacttgttt tcaccattgg ggctaacttt gctgctagga  240

gttcaagcca tgcctgcaaa tcgcctctct tgctacagaa agatactaaa agatcacaac  300

tgtcacaacc ttccggaagg agtagctgac ctgacacaga ttgatgtcaa tgtccaggat  360

catttctggg atgggaaggg atgtgagatg atctgttact gcaacttcag cgaattgctc  420

tgctgcccaa aagacgtttt ctttggacca aagatctctt tcgtgattcc ttgcaacaat  480

caatgagaat cttcatgtat tctggagaac accattcctg atttcccaca aactgcacta  540

catcagtata actgcatttc tagtttctat atagtgcaat agagcataga ttctataaat  600

tcttacttgt ctaagacaag taaatctgtg ttaaacaagt agtaataaaa gttaattcaa  660

tctaaaaaa                                                          669
```

<210> 78
<211> 486
<212> DNA
<213> Homo sapiens

<400> 78

```
ggacgccatc tctgaggccc aaggccacag tgaaatcaca gaagcaacac agctgggaaa    60

ggactcgatg gaagagctgg gaaaagccaa acccaccacc cgacccacag ccaaacctac   120

ccagcctgga cccaggcccg gagggaatga ggaagcaaag aagaaggcct gggaacattg   180

ttggaaaccc ttccaggccc tgtgcgcctt tctcatcagc ttcttccgag ggtgacaggt   240

gaaagacccc tacagatctg acctctccct gacagacaac catctctttt tatattatgc   300

cgctttcaat ccaacgttct cacactggaa gaagagagtt tctaatcaga tgcaacggcc   360

caaattcttg atctgcagct tctctgaagt ttggaaaaga aaccttcctt tctggagttt   420

gcagagttca gcaatatgat agggaacagg tgctgatggg cccaagagtg acaagcatac   480

acaact                                                              486
```

```
<210>      79
<211>      752
<212>      DNA
<213>      Homo sapiens

<223>      unsure at all n locations
<400>      79
```

```
ggggctacga gcccaacgag gatggcacag cctgcgtggg gactctcggc cagtcaccgg    60

gcccccgcnc caccacccc ancnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn   120

nnnnngccac tgctgcaccg gtcctcgtag atggagatct caatctgggg tcggtggtta   180

aggagagctg caagcccagc tgctgagcag ggggtgggac atgaaccagc ggatggagtc   240

cagcagggga gtgggaaagt gggcttgtgc tgctgcctag acagtaggga tgtaaaggcc   300

tgggagctag accctcccca agcccatcca tgcacattac ttagctaaca attagggaga   360

ctcgtaaggc caggccctgt gctgggcaca tagctgtgat cacagcagac agggtcgctg   420

ccctgatggc gcttacattc cagtgggtct aatgaccata tcttaggaca cagatgtgcc   480

cagggaggtg gtgtcactgc acaggaagta tgaggacttt agtgtcctga gttcaaatcc   540

tgattcagga actcacaaag ctatgtgacc ttcaccagt cacttaactt gttagccatc   600

cattatcgca tctgcaaaat ggggattaag aatagaatct tggggttagt gtggagatta   660

gattaaatgt atgtaagaca cttggcacaa aacctggnac atagtaaagg ctcaataaaa   720

acaagtgcct ctcactgggc tttgtcaaca cg                                752
```

```
<210>      80
<211>      552
<212>      DNA
<213>      Homo sapiens

<223>      unsure at all n locations
<400>      80
```

```
aaatatattc tcaacatttt cagtgagaat ttcttgtaat ggcacctcaa atnttatact    60

cttaaaaaan aacaataatt tgtgaattac caccaaaagg caatggcagt cctacattta   120

agaatagagc tatgcaaact ctgttaaaaa ctatgaggaa aacttatatt agaacttttg   180

atatatacta aaatactgat tatcttaatc acattttccc cagagataaa cattgagaga   240

acgaaagcca aagtgtcatt taagagagat atatatgaaa aagtaacatt aatatataga   300
```

```
actttaccat caccagccgt agttgataga aaatattagt ttcagaatta ccctccttta  360

aaaaataaga gactatttgt tttctttttaa tttctatgaa taaaagaaat ttttaaaaac  420

tttaaaattt taaatattag tcaaaatact ttttaagtcc tgagtgctta caggtagttg  480

ttaaaaaaat tttaaggcca ggcatggtgg ctcgctcaca cctataatcc taggatctgg  540

gaggtcgagg ca                                                       552
```

```
<210>      81
<211>      135
<212>      DNA
<213>      Homo sapiens

<400>      81

ttcactcttc aaatgtttgc ttcctgttcc tgctaccctg aaccctgctg ttgaggggtt   60

ctagtgtcta caagggaacc gctgccacca cgaggaataa cacagtgctc ttacagcctg  120

ttccaagtgt ggctt                                                    135
```

```
<210>      82
<211>      225
<212>      DNA
<213>      Homo sapiens

<400>      82

ggagaatgtg acatagattt gctggcacat gggtttccta tgagcaaacc ccagaattgg   60

acacacgtat ctggtgctgc attggaatca tccgaaaaaa ccaaggcttg cattgcatat  120

ctatctgctg tctgctgaag gagccctgtc tgtgtgccca aggaagtgac atccttgcca  180

agggctgtcc ctgttgcagg agatgaagga gccctgtcta tgtgc                  225
```